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PLANNING THEORY

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PLANNING THEORY

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PREFACE

THIS IS A BOOK ON PLANNING theory. It treats planning done at all levels in business enterprises, but since planning knows no institutional bounds, much of what we say is applicable to other kinds of organizations. We recognize that effective planning ends in implementation and control of the plans, and these considerations are woven into our body of theory.

We were prompted to write this book because of a void in the literature on management theory: an absence of writing dealing with the planning function. As a result of this void we found it necessary to develop our own structural framework. This framework consists of three parts: the planning process, the dimensions or characteristics of a plan, and the influence a given set of dimensions will have on the planning process. According to our theory, any administrator faced with a planning problem should take cognizance of the plan's dimensions and then determine his planning procedure in the light of these dimensions. In order to develop a unified theory

of planning, it was necessary to work out subtheories in vital areas such as need determination, data collection and processing, and testing. In addition, we have worked into our general theory of planning theories from existing fields of study such as communications, decision making, and persuasion.

The book is divided into five parts. Part I sets the foundation for the development of a theory of planning. To this end it describes the parts of a plan, a recommended planning procedure, and the dimensions of a plan. Part II builds upon the foundation set in Part I. We discuss the theory of need determination, the theory of choice, the theory of data collection and processing, and the theory of testing as they relate to planning. Part III examines the varied roles of participants in the planning process with particular emphasis on specialists and formal committees. Part IV concentrates on the planning roles of the auxiliary functions of communication and persuasion. Finally, in Part V the major subtheories previously discussed are united into an integrated general theory of planning. Although the book progresses in logical order from Part I through Part V, the arrangement of parts is not intended to represent a one-two-three-step approach with each advanced step building on the previous step.

Another motive underlying the writing of this book arose from the lack of any existing book that could be used for the teaching of this important managerial function. This book can be used in a postgraduate or senior course in planning, organization, or general management; or it can be used with existing business policy case books and total enterprise management games, as a supplementary book. In the latter usage, it can serve as the structural framework for case analysis or playing the game. We view this book as serving a second and perhaps more important role for advanced students, management scholars, and scholars from other disciplines interested in the advancement of management theory. Students may find parts of the book a fruitful source of topics for major research projects. Students who used the rough manuscript in seminars in management did research on most major topics covered in the book. They used business and nonbusiness enterprises either as units to be audited (by the use of principles stated in the book) or as a laboratory to test the stated hypotheses or theories. More advanced scholars may wish to test some of the hypotheses presented and perhaps refine and expand upon some of the newer topics covered in the book. We hope that the conceptual framework presented here will serve as a useful model for further research and development of planning theory.

A third audience to whom this book should appeal is the practitioner who finds himself living each day with a multitude of plans varying in

complexity, significance, and comprehensiveness. This is a book on theory, but it does contain significant practical implications. At its best, *Planning Theory* in its entirety will be a useful general guide to each person responsible for initiating and carrying out an organization's plans. A more limited use will be the reader's reference to specific chapters or topics such as "Theory of Need Determination" or "Theory of Choice." Parts of the book have already been used in management development programs with participants ranging from presidents down to the lowest supervisory levels.

Some readers will consider the book abstract. To this charge we plead guilty. We have tried to offset the abstractness by using many examples drawn from a variety of sources. Theory is always abstract. But good theory is always practical. We believe that the theory is presented in a way that will facilitate bridging the gap between study of the theory and its practical application. Some of the book is difficult reading—abstract, complex, closely knit. We hope that the reward for working through these chapters outweighs many times the effort expended in doing so.

Seattle, Washington

PRESTON P. LE BRETON
DALE A. HENNING

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PLANNING THEORY

Part I

SETTING THE FOUNDATION

for a theory of planning

We searched in vain the literature dealing with the general area of administration and management for some guide that might assist in the framing of a useful scheme or structure for the development of a general theory of planning. To satisfy this need we have developed a scheme quite independent in concept of any approach known to us. The scheme has as its major components two significant parts. One part deals with the planning procedure and extends from the determination of the need for preparing a new plan or revising an old plan to the receipt of final approval or disapproval of the finished plan. The second part deals with the dimensions of a plan such as complexity, comprehensiveness and significance. In total there are 13 dimensions. The key to the development of our general theory of planning is the integration of these two parts.

In the first chapter planning is defined and its importance described. The various parts of a plan are then presented and their importance established. The chapter ends with a description and evaluation of a recommended planning procedure. Chapter 2 in its entirety deals with the dimensions of a plan. Each dimension is described in detail. Its relationship with various parts of the planning process is then established. After all dimensions are evaluated, their combined influence is presented.

1

ROLE OF PLANNING

IN A COMPLEX POLITICAL AND economic society such as exists in most of the Western countries, one can understand the constant search for an explanation of the forces which influence and give direction to the major institutions of our society. In recent years considerable inquiry has been focused on the role of the executive as perhaps the key to discovering the forces which make our institutions dynamic instruments. This search for an understanding of the nature of the executive's job has renewed interest in our examination of the functions of management.

Although there is no unanimity among management scholars or practitioners as to the best single way to divide the functions of management, there is substantial agreement that planning, organizing and controlling are three essential, core functions. Other functions usually selected are staffing, directing and coordination. Our purpose here is not to resolve this difference in interpretation. Rather we wish to illustrate that the functional ap-

proach to the study of the management process has widespread interest and acceptance and that planning is considered to be one of the important functions.

While we see considerable value in the use of the functions of the manager as an explanation of the management process, we see two major limitations in this approach for the purposes of our study. Planning in a pure sense goes across all functions—organizing, controlling, coordinating, staffing and directing. We do not think the functional approach gives this emphasis because of its over-concentration on each unit as a separate function.

Secondly, the traditional discussion of functions does not place proper focus on the vital role of major plans as they affect all functions. We believe that the functions of organizing, directing, controlling, staffing and coordinating have greatest meaning when they are associated with a given plan. Each of these functions is planned and subsequently these plans are implemented to accommodate a specific major plan or groups of plans, the introduction of a new product, the entrance into a new territory or the replacement of obsolete equipment, for example.

This is not suggesting that each of these functions cannot be studied independently. Quite the contrary, we believe that a theory of organization and theory of control ought to be taught. We say simply that the application of this theory is conditioned by a group of precise plans at a given time and the organization plan or control plan developed should reflect the needs of the major plan rather than be viewed as independent units.

A MORE USEFUL APPROACH

Rather than use the approach of breaking-down the job of the executive by functions, we will use the following description of job components: establishing objectives and goals, determining policies and procedures, preparing necessary plans for meeting stated objectives and goals,[1] and implementing these plans.

Establishing objectives and goals

Objectives and goals are thought of as statements of the purposes for which our organized group has been formed. This would appear to be the first logical step before an enterprise is started. Once the enterprise has been established and becomes a dynamic entity, the objectives may change as conditions warrant. After precise objectives have been set at

[1] Note that most current authors include these three concepts under the function planning.

the top levels of the organization, a large number of subobjectives are usually set for all operating units throughout the company. It is expected that the objectives set at each level will be consistent with all other objectives.

Determining policies and procedures

In light of the specific objectives set at all levels within the enterprise, broad guides should then be established to assist those responsible for preparing plans designed to accomplish the stated objectives. These guides are called policies. For example, if one of the immediate goals of the marketing department is to introduce a new product on the market, the department may wish to establish policies (or reconsider existing ones) relative to channels of distribution, pricing, territory, credit and advertising. Procedures are more detailed and specific guides which are particularly helpful to operating personnel in the daily performance of their routine tasks.

Preparing necessary plans

The attainment of a given goal will be best achieved by first devising a precise plan of action. This will begin with a clear statement of the objectives of the plan. When an enterprise-wide plan is formulated, the objective of the plan may be a near duplicate of the objective established for the enterprise. As lower units of the organization are reached, the objective of a given plan will be peculiar to the plan being prepared although consistent with the over-all objective.

The finished plan will contain a recommended course of action and a statement of required resources. Such items as manpower needs, equipment and machinery requirements as well as financial demands are usually listed. Let us use the example of a marketing department which has the precise objective of selling 100,000 units for the year. The marketing plan would probably spell out, among other items, the number of salesmen required, the quota for each, their territorial assignment, the routes to be taken and the selling approach to be used, the advertising media to use and the budget for each medium. Depending upon how detailed a plan the marketing manager might wish, this plan could contain reference to hundreds of items.

It is important to note that a plan of the magnitude suggested above would be the focal point of all activities of that department for the year. Two additional facts should be emphasized. Within each major plan, reference is usually made, although not in these terms, to the functions organizing, staffing and controlling. If a large sales force is to be established, a sales manager will probably be needed. The authority and re-

sponsibility of this new position will be presented in the plan. Basic information regarding the number of sales people and their qualifications will also be included. The type of reports each salesman and the sales manager are to submit to the marketing department head will be stated. The point is that, to a significant degree, each plan of a general nature will include reference to the various functions of organizing, staffing and controlling.

The second significant fact is that as a plan is prepared, it will often require the creation of new policies or the redefinition of existing policies. For example, the policy of the company might be to hire college-trained sales engineers. If the plan should call for an increase of 10 per cent in the sales force and past experience has indicated that market conditions are such that it would be unlikely that the company could obtain the quality of people needed at the existing salary range, consideration may be given to changing the selection or compensation policies. The point is that although it is proper to talk about policies in a general way as giving guidance to executives, it should be noted that the real test of a sound, realistic policy comes when specific plans are prepared and implemented.

Implementation of plans

The elaborate and well-conceived plan will not bring much if any benefit to the company until action is taken to put it into effect. The marketing executive who has his plan ready (he may have had it approved by a higher authority) may give explicit instructions to the personnel department to begin processing candidates (directing); he may subsequently select a sales manager and several salesmen (staffing), and convey to them their general duties (organizing). He will check reports from his subordinates (controlling) and give assistance where needed (directing). He will observe the performance of the advertising manager and sales manager to see that they are working together (coordinating). As the year progresses, he may begin preparation of the next year's program (planning). And the cycle is repeated. Our attention will be focused on all but the last of these components—the implementation stage.

We believe that a very useful way of looking at any executive's job is that of almost continuous preoccupation with developing or participating in the development of plans, and seeing that each is carried out to a successful conclusion. It is within this setting that we will develop our theory of planning.

Our emphasis will be upon the planning function in the pure sense as it relates to all major activities—research and development, production, marketing, finance and personnel. Thus, when we refer to production

planning or finance planning, we use it simply to illustrate the planning process. Our illustrations will usually be concerned with important plans such as those concerned with the introduction of a new product, the acquisition of a computer or the negotiation of a large loan. What we have to say, nonetheless, will have general application for all plans.

DESCRIPTION AND TYPES OF PLANS

A plan is a predetermined course of action. So that the reader will have a clearer picture of what constitutes a plan and what is involved in the planning process, we will describe certain common types of plans and draw some distinctions between planning and other managerial activities.

A plan must have three characteristics. First, it must involve the future. Second, it must involve action. Third, there is an element of personal or organizational identification or causation. That is, the future course of action will be taken by the planner or someone designated by or for him within the organization. Futurity, action, and personal or organizational causation are necessary elements in every plan.

Plans and decisions

A decision is the resolution of conflicting alternative choices. A decision need not involve either action or the future. One can decide that milk tastes better than coffee. This is a decision that involves neither action nor futurity.

Decisions, of course, are used at every step in the planning process and are, therefore, inextricably interrelated to planning. Conversely, it is possible to use a plan to arrive at a decision. But decisions and plans are not the same, and decision theory and planning theory are quite different bodies of thought.

Plans and forecasts

Planning is closely related to forecasting, and in fact, the dictionary lists the two terms as synonyms. Forecasting is predicting some future condition or event. Forecasting, by definition, involves the future. Sometimes forecasting does involve future action; sometimes it does not. As is pointed out in Chapter 8, predicting tomorrow's weather involves action that is necessary in making the prediction, but it does not involve a *predetermined course of action.* On the other hand, forecasting sometimes involves future action that is to be taken by someone else. For example, one might forecast that France will devalue the franc; here

one finds both futurity and action, but it still is not planning. It is not planning because the element of personal or organizational causation is absent. In order for it to be a plan it would be necessary that the planner or someone designated by him or for him take the future action.

Planning's distinction from forecasting is complicated by the fact that forecasting is used in planning in two ways. First, the planner attempts to predict what actions other people will take, what future conditions will exist, and then builds his future course of action based on these predictions. Second, he tries to predict what the results of his plans will be —or rather he determines what conditions he would like to bring about and then establishes his plan to accomplish this. Thus we find forecasting, like decision-making, an integral part of the planning process, but at the same time something different and distinguishable from planning itself.

Plans, standards, and goals

Plans, standards and goals are very closely related concepts. When plans are expressed in terms of the results that one hopes to achieve, they may be called goals. For example, a plan to increase sales by 10 per cent in the forthcoming year may also be considered to be a goal. However, it is useful to try to separate the two. This may be done by considering that a plan is a predetermined course of action which has as its purpose the bringing about of a certain condition—the condition being the *goal* or objective of the plan.

Standards, in turn, are very closely related to both plans and goals. Standards are the criteria one uses to determine whether or not the plans are being carried out as expected. That is, performance and results in the implementation of a plan are compared with what was expected to happen under the plan when it was designed. Standards are the means of comparing the performance with the expectations.

In a sense, every plan's goal can be considered to be a standard. Ultimately, the results of the plan will be measured against the goal of the plan; thus, the goal becomes a criterion (or "standard") of comparison. Perhaps not all goals become standards. One might set a goal in life of retirement at age 60 without ever stopping to measure his progress toward such a goal. In this case, there would have been a goal but not a standard against which to measure performance. However, we are here concerned with the goals of plans of action, and where plans exist it is very likely that the goal will become a criterion for measurement.

With few exceptions in this book we will use the term "plan" to refer to a predetermined course of action; a "goal" will be the condition that is hoped to be brought about as a result of the plan; a "standard" will

be a criterion that has been established for the specific purpose of measuring the results of a plan as compared with the expected or hoped-for results of the plan.

Single use and standing plans

Some plans are intended to be used only once, such as the plans necessary for the construction of a new factory building. Other plans are used over and over again. An example of this type would be the plan for routing a particular product through the factory: Each time orders for that product are received it is possible to refer to the previously-devised plan for routing the product through its manufacturing process. There are several types of standing plans that we usually refer to as policies, procedures and methods.

Policies. Policies are standing plans. Policies are general guides to future decision-making that are intended to shape those decisions so as to maximize their contribution to the goals of the enterprise. Policies are the instruments by which goals are achieved. They are broad in nature. If the reader will stop to examine business policies with which he is familiar, he will discover that they are indeed predetermined courses of action. A personnel policy says, "This company will endeavor to pay at least the wage rates prevailing generally in the community." For every new man who is hired this means that the decision and action taken relative to his wage has been in part predetermined. The starting wage will not be below community levels. Or the company has a "soft-sell" policy for its sales department. This shapes future action to the extent that salesmen are precluded from using certain techniques and arguments, and the advertising manager must use limited persuasive media.

Methods and procedures. Like policies, methods and procedures are standing plans. They are courses of action which have been predetermined. Usually, they are less general than policies. Usually, they are of less significance and comprehensiveness (see Chapter 2) than policies. They are relatively detailed, complete and specific plans for the guidance of business activities. Examples are the standardized "procedure" a bank goes through in handling a check and the "method" laid out for an assembly operator to follow. Being predetermined, they allow company personnel to handle hundreds and thousands of problems with predetermined decisions or rules for decision-making. Where the procedure or method is used continuously, it may be difficult to conceive of it as a plan or "predetermined course of action." However, when the procedure or method is used intermittently, it becomes quite evident that a standing plan is being implemented—as is the case when a product order is received and the production control man goes to his file and pulls out the

standard plan for steering that product through the plant. The future actions taken relative to that product have been previously established—predetermined.

PARTS OF A PLAN

A plan is an instrument to be used to assist in the performance of an assigned task. For a plan to be of maximum value, it must not only be logical in design but it must also contain reference to means to be used for implementing the various components. Every formal plan should contain statements covering the following areas:

1. Title of the plan.
2. Name of persons who authorized the preparation of the plan.
3. Name of persons who approved the finished plan.
4. Name of persons who prepared the plan.
5. Purpose or objective of the plan.
6. Outline of problem.
7. Recommendations—course of action to be taken.
8. Expected results.
9. Resource requirements.
10. Supporting evidence—justifications for recommendations.
11. Date plan was submitted and approved, and is to be implemented and completion dates for each component of the plan.

Title of the plan

This serves to identify the project and is essential to its proper control. Frequently used titles are "Salary Plan," "Machinery Replacement Schedule," and "Package Design Plan." It should be noted that great care should be used in assigning titles to avoid misinterpretation. The use of such titles as "Plan to Reduce Work Force by 15%" or "Plan to Replace Obsolete Equipment with More Efficient Labor-Saving Machinery" may lead to unnecessary difficulties. As implied above, predetermined courses of action are not always called plans; they frequently are entitled, among other things, schedules, programs or projects.

Identification—persons authorizing, preparing, and approving plan

The person assigned the responsibility for implementing a plan will want to know by whose authority he has been directed to perform the task. This will give him some perspective as to the importance of the plan, and it will help in obtaining necessary cooperation from other units.

From an operating point of view, he would want to know the names of the persons intimately concerned with the preparation of the plan in order that he might seek their assistance where needed.

Purpose or objective of the plan

This would be an elaboration of the title in which an explanation is given of the various areas covered by the plan. "Salary Plan," for example, might include reference to the need for establishing a systematic way of determining base rates, a merit rating or performance review system for assigning individual rates within an established range and a retirement program that would provide some degree of flexibility in handling older employees. It should suggest to the reader what he can expect to find in the body of the plan.

Outline of problem

Since most plans are prepared to improve upon existing plans or to provide for activities not currently performed, it is advisable to include a statement of the specifics of the problem. This gives real meaning to the recommendations which follow.

Let us use the same example as above. The need for establishing a systematic way of determining basic wage rates may have been highlighted by the difficulty experienced in recruiting and holding competent employees, the dissatisfaction expressed by employees that the salary rate is not consistent with job value, and the known fact that various jobs are assigned similar rates although the duties are significantly different in scope and complexity.

The problem may be stated as follows: "We must establish some system whereby we can measure the relative values of jobs to the company and then we must assign wage rates commensurate with these values." The system should provide for consistency in assigning values, it should be defensible, and, if possible, easily understood.

Recommendations—course of action to be taken

Of course, this is the part of the plan that will receive greatest attention from all reviewers. It is the statement, in specific terms, of what ought to be done to meet the problems outlined. It should be complete in every detail so that implementation can take place with minimum difficulty. One part of the total recommendation to solve the problem of a base rate structure could be the use of a job evaluation system. Ideally, a specific plan, such as the "National Metals Trades Association Point

Rating System," would be suggested. Other points covered would include the name of the department responsible for establishing the job evaluation program, the date it is to be inaugurated, the length of time it should take to complete the plan, and the procedures to be followed in all stages of preparation, implementation and follow-up.

Expected results

This section should also be as specific as possible since it will serve as a standard by which success of the plan can be measured. It also serves, in a sense, to justify the cost incident to establishing the plan. The expected results from setting a base rate structure by use of job evaluation might be a more consistent pay structure for jobs within a class and between classes, greater control over all pay schedules, and ease of adjusting the overall schedule to meet market conditions.

The difficulties that might be experienced should also be noted. Since a job evaluation program is being instituted to improve the present wage structure, it is expected that there will be changes in the present wage pattern. This could cause dissatisfaction on the part of job holders whose job values are reduced even though incumbents would still receive the present rate. A degree of inflexibility may be incorporated in the program making it difficult to adjust individual rates to internal and market pressures.

Resource requirements

Again, these items should be as specific as possible including manpower needs, material, supply, and equipment requirements, all translated into dollar units. There will be a major cost incident to the establishment of a job evaluation program since a job evaluation plan will probably be bought, jobs analyzed, described, and then evaluated, a labor market survey conducted, and a wage curve determined. Frequently, a decision is made that as a result of job evaluation no person on the payroll will suffer a reduction in salary although the rate of pay for a given job may be reduced. However, where job values are increased, the incumbent will receive the new rate. This latter adjustment is frequently fairly large. The maintenance of the program, revisions of job descriptions, re-evaluation of jobs and answering of inequity claims may require the services of one employee or additional personnel. Most resource requirements can and should be expressed in money terms as well as in units peculiar to their nature, that is, in dollars as well as pounds, feet, and man hours. Usually a large part of the resource requirements will be presented as a budget.

Supporting evidence—justifications for recommendations

This section could be included with the statement of recommendations. It is often preferable however (especially when the justification is fairly technical and long) to include these items as an appendix to the body of the plan.

Its purpose is to provide answers to questions that may be raised about any part of the plan—particularly the recommendations. Someone may question the need for a plan because he is not convinced the problem is as severe as presented in the outline of the problem. Any supporting statement (not already included in the body of the plan) that could help clarify such doubts should be presented. Note that when the plan is being prepared, attempts should be made to anticipate these questions.

In our job evaluation examples, the recommendation that a point rating system be used and that it be the "National Metals Trade System," in particular, may be challenged. Since this is one of the most important parts of the plan, a fairly elaborate explanation may be presented which shows relative advantages and disadvantages of a point rating system over the factor comparison, ranking and classification systems. This could be followed by a discussion of the peculiar needs of the company and the reasons why a point rating system is particularly desirable. The same approach can be used to justify the selection of a particular point rating system.

Submission, approval, implementation, and completion dates

Primarily as a control device, the date the recommended plan was submitted, the date of approval and date for implementation of the plan should be included within the total plan. The first date compared with the date of approval gives some indication of the length of time it takes to get action on various plans. The time lapse between the first and second dates will also suggest the up-to-dateness of the material presented in the proposal. The implementation date, of course, will indicate the amount of time available before action will take place on the plan. The establishment of a time table for the expected completion date of various components of the plan is useful for several reasons. It sets a target date for the completion of a given phase of the plan, it alerts line management to the fact that they will likely be operating under new conditions at a given future time, and it serves as a basis for measuring actual achievement against expectations. Should a major lag develop between the expected completion date and actual progress, a major revision may be made of the original plan.

Our purpose in presenting the various parts of a plan is to gain additional insight into the planning process. For this same reason, let us look into the planning procedure.

PLANNING PROCEDURE

A plan can be so perfect in construction that its success may be almost a matter of automatic application of its provisions. Or, a plan may be so imperfect that the chances of meeting its objective are extremely small if the recommendations within the plan are followed. Perhaps even more disastrous than a poor plan is no plan at all. At least a poor plan might be corrected once its shortcomings are discovered in attempted application. When one is not aware that a new plan is needed to correct poor conditions or that a promising opportunity is not being capitalized upon, then he is in no position to formulate a plan of any kind. Planning is not an automatic process. It does not just happen. The following sequence of steps is one possible procedure to follow in developing a plan.

1. Becoming aware of a possible need for formulating a plan.
2. Formulating a precise statement of the objective of the plan to be prepared.
3. Preparing a broad outline of the proposal.
4. Obtaining approval of the proposal.
5. Organizing planning staff and assigning responsibility.
6. Determining the specific outline of the plan.
7. Establishing contact with all cooperating units.
8. Obtaining necessary data.
9. Evaluating data.
10. Formulating tentative conclusions and preparing tentative plans.
11. Testing components of tentative plans.
12. Preparing the final plan.
13. Testing the plan.
14. Obtaining approval of the plan.

Becoming aware of possible need for formulating a plan

There is no more important stage in the entire planning procedure than the original decision that a given idea has sufficient merit to warrant consideration of its development. New ideas often come from the least expected source, although an alert manager will cultivate every possible source. A worker on the production line who observes the frequent delay in the arrival of raw materials or parts to certain work stations may think of a solution to the materials handling problem which would result in a new plan for moving goods out of storage to and between machines and

the finished product to temporary storage. A department head who finds it increasingly difficult to keep trained technicians observes that many of the more promising men tend to leave for lower paying jobs with companies which are not particularly successful in their field. Upon careful questioning of various employees, he learns that many are disgruntled, because their jobs lack challenge, and opportunity for promotion appears small. As a result of this situation, the company may develop a new plan of job enlargement, job assignment, job rotation and promotion. Every contact the company has with the outside world can be developed into a source of new ideas which may lead to the preparation of a plan. The same can be said about internal units from the president on down to the lowest member of the organization.

Of course, many plans are initiated on a more routine basis. A sales and advertising program or a production plan (particularly in a job shop), for example, may have a relatively short life and the successful completion of a plan suggests the need for a new plan. These plans, and particularly others of longer duration, may have a built-in guide which would suggest the need for developing new or revised plans. An existing plan for extending credit, a distribution plan, or a compensation plan may be failing to meet the established objective. When a sufficient variance occurs between actual performance and expectation, it may be almost automatic for a study to be initiated to investigate the cause and suggest remedial action. Finally, suggestions may come from an organizational unit charged with the responsibility for making many existing plans obsolete. Such units as research and development, systems and procedures, and operations research are concerned with finding better means for achieving the objectives of the enterprise.

Formulating precise statement of objectives of plan to be prepared

Frequently a new idea is rejected because the originator has failed to make his thoughts clear to those responsible for approving his recommendations. Or, an idea may be rejected because the reviewer fails to see the value of the proposal. Although the prime responsibility for conveying information may be assigned to the communicator, we will look upon it as a dual responsibility.

The final statement of objectives or goals of a proposal is a function not only of the capacity of the creator but of other elements of his environment as well. An environment should be provided, therefore, that facilitates effective communication between all elements. Thus one goal of each executive should be to develop subordinates so they can give full expression to their most theoretical and perhaps half-formulated ideas. We will deal with communication theory as it relates to planning.

Preparing broad outline of proposal

With a statement of the objectives of the proposed study available—a new incentive system, diversification of product line or changed layout of machinery and equipment, for example—it is now possible to prepare the balance of the proposal. As a proposal covers a subject area that is fairly complex, comprehensive and important, the supporting data usually takes on greater scope. Such items as statement of need for study, expected results, approach to be used, manpower needs, budget needs, and time schedule are included.

The important point is to provide all pertinent information so that the approving authority can make an informed decision. Frequently a choice has to be made among several good proposals because the scarcity of company resources, human and material, will not allow for the simultaneous preparation of all recommended plans. Selection of one rather than another then becomes a question of relative contribution compared to relative cost. It is often desirable to formalize and standardize the preparation of proposals to facilitate ease of comparison.

Obtaining approval of proposal

All of the work up to this point has been preparatory. In a sense it has been the getting-ready process. The crucial time is at hand when acceptance or rejection will be had. Usually a procedure has been established for submitting proposals through channels to the proper authority. Frequently, and particularly for major plans, provision is made for having the originator of the proposal appear before the authorizing executive. This can take the form of having an elaborate presentation made or a simple question and answer session. The purpose again is to provide all the information necessary so that an intelligent decision can be made.

It should be emphasized that up to this point, we have been concerned with getting authorization to initiate a study which when completed will be a plan. We have gone through a rather complex procedure wishing to emphasize some of the pitfalls between the creation of an idea and getting approval for its possible exploration.

Organizing a planning staff and assigning responsibility

With approval of the proposal given, the official planning group can be organized. At times the choice of persons is prescribed by the nature of the project and regular job duties of persons selected. Occasionally a more formal provision exists where projects are directed to prescribed departments. The important point here is that adequate representation be given to insure that all needed data are obtained and that reasonable

representation is had from those units which will be seriously affected by the plan. Some recent developments in organization theory are most helpful in suggesting how one might best organize for planning. When the staff is organized, the total project will be divided among the members of the planning group. Where necessary, operating policies will be established.

Determining specific outline of the plan

Usually the details of the project submitted in the original proposal are not sufficient to guide the planning group in its day-to-day work. For this purpose each member may be requested to formulate more detailed guides. In a sense this could be thought of as planning how a plan is to be prepared. This stage is extremely important because it gives meaning to the division of labor within the planning group, provides direction to each member, indicates any problem of excessive overlap, and allows for the setting of more precise time standards for the completion of various components of the plan.

Establishing contact with all cooperating units

When a plan is to be prepared from data collected from a variety of sources, it is often desirable and at times necessary, to make official contact with responsible persons in each participating unit. It is well to divide these units into two broad groups. One group would include units which cooperate on a fee basis and are thus subject to contract. The second group, usually from within the enterprise, furnishes its information on a non-fee basis.

The first group would include consultants who might provide such services as conducting economic forecasts, market analyses and internal audits. The problem here is one of selecting a reliable agency and negotiating the contract.

Official contacts should be made within an organization so that the person giving the needed information knows in advance that the project has been authorized. This will usually make him more cooperative, both in providing information requested and in exchanging views with the researchers. The same can be said for the large group of non-employees. These contacts would include, among others, suppliers, distributors and trade associations.

In recent years, executives have developed renewed interest in the economist, behavioral scientist and mathematician as sources of information and interpreters of data. We will examine the role of these specialists in the planning process.

Obtaining necessary data

The actual work of collecting the necessary information can often be laborious and emotionally upsetting. When a consultant is hired, of course, much of this problem is shifted to his shoulders.

The task is made doubly difficult when company records are inadequate and when the information desired concerns itself with long-range projections.

There are a number of sources of information and research techniques with which good researchers are familiar. We attempt to develop a theory of data collection and processing.

Evaluating data

It has been said that a decision is no better than the information upon which it is based and the qualifications of the person making the decision. These points go hand in hand because a trained researcher, knowing the shortcomings of given statistical information, can make maximum use of the data available. A less competent researcher may arrive at less useful conclusions with more adequate data.

The increased use of such techniques for acquiring information as market research, economic forecasting, morale surveys, and psychological tests have put an added burden of responsibility on the persons using the information so collected. Frequently the persons supplying the information and those using the data are not the same, and the report to the decision-maker may be just the findings or an interpretation of the findings.

Once it has been decided that the data are valid and reliable and their meaning determined, certain conclusions can be drawn.

Formulating tentative conclusions and preparing tentative plans

Where there are several components which are interrelated (conclusions arrived at for one component of a plan will affect conclusions in other components) they must be integrated into a tentative plan. At times a single conclusion is all that is necessary for the formulation of a plan. At this stage, the plan may be presented in a general way if it is felt that there are certain components which need testing. For example, a new tentative recruiting and selection plan might include new sources of recruits, a patterned interview approach, psychological tests and a new induction program. The plan might simply include a listing of these components with an explanation of how they are to be used.

Usually at this time a plan is prepared in an informal style and its introduction may be done verbally. The important point is that the

tentative plan is unofficial and has been prepared to guide the planners in testing out their recommendations. Where a fairly complex problem exists such tools as economic analysis and mathematical programming will be found useful.

Testing components of tentative plans

As suggested above, many tests are often performed on various components before a final plan is prepared. In the example of the proposed new recruiting and selection program, tests may be run on a group of recruits selected at random. Selected company employees of some standing may be included in the test.

Tentative plans are tested to discover any possible flaws that may exist. It should be emphasized that such a test may not discover actual errors in the plan but only inadequacies. It is possible that in the above case useful information could be obtained relating to the techniques of induction, working with new sources of recruits and interpreting patterned interview results. Finally, usable information may be obtained from those units participating in the test. The members of the personnel department and others performing the functions outlined above along with the employees and prospective employees exposed to the program are often able to offer useful suggestions.

One of the most promising aids to planning is the use of models to simulate the real world. These models are used for testing plans as well as for decision-making purposes.

Preparing the final plan

If the tests of the tentative plan indicate serious shortcomings, it may be necessary to repeat many of the steps listed previously even to the point of submitting a new proposal. Usually, however, desired changes are not far-reaching if other stages of the planning process have been done with care.

When necessary changes have been made, it may be desirable to test the revised components. After the planners are satisfied with test results, each component is then integrated into a unified plan. Note that some plans are not easily or logically subdivided so that the total tentative plan may have been put together at the beginning.

The plan as it should appear in the final form has been outlined and discussed in a separate section of this chapter entitled "Parts of a Plan." It is suggested that this section be reread. A key point to be kept in mind is that the approval of the plan and the responsibility for implementing the plan are frequently assigned to persons who have not taken a major part in its preparation. The plan should be prepared in such a

way that it will answer all significant questions that the planners could anticipate receiving from all pertinent sources.

Testing the plan

The test we have in mind is that of completeness and saleability. Will the plan in its present form be approved? Or will it be rejected in whole or in part? The best approach, of course, would be to have a live test of the plan over a sufficiently long period of time to prove its soundness. The evidence of this test would be a living proof of the value of the plan. Frequently this is not possible.

A modification of this approach is the "dry-run" in which the real world is simulated as closely as possible. This approach can often provide rather precise answers to questions that could be otherwise answered in only a general fashion.

The purpose of the test should be twofold: to provide as much factual information as is needed to allow for an intelligent decision to be made regarding its value to the enterprise, and to insure ease of interpretation and application by those units responsible for its implementation.

Obtaining approval of the plan

When the final plan is properly prepared and tested, it is then ready to be submitted for approval. This is by no means an automatic process, even for plans which are conceptually sound and which promise to result in significant increase in revenue or reduction in cost.

The best prepared plans frequently fall short of conveying their true image to the reader. The technical nature of the subject matter, its uniqueness or its vagueness may cause the difficulty. When the final plan can be presented in person to the authorizing group, many of these shortcomings can be corrected.

A plan may be vetoed because it does not have sufficiently high priority over other plans. This is simply a matter of relative worth. Plans should be prepared and presented so that intelligent decisions can be made between plans as well as about a given plan. Within a given year the choice might be among three possible plans, of which only one can be adopted—replace a number of old machines, build an extension to the plant and renovate existing plant or install an automatic conveyor system.

A plan may be rejected because of the seriousness of the anticipated repercussions beyond the scope of the plan. Such areas as a new incentive system, retirement program, product line, and sources of supply may fall within this category.

In the preparation of the final plan, all of these possibilities should be

anticipated and explicit reference made to each consideration. A plan should be presented in such a way as to receive approval because of its merits, not the subtlety of the presentation.

In our discussion, we hope we have given the reader a better insight into the planning process. We have attempted to make reference to the major elements of planning which will be the subject of the remainder of this book.

2

DIMENSIONS OF A PLAN

WE ARE DISCUSSING PLANNING IN a somewhat different sense than that frequently encountered in management publications. A plan, as we view it, is a unit complete within itself with a definite beginning and end. The planning activity is characterized as being the core of the management process with all other functions ultimately dependent upon it. Let us take our concept of a plan as a predetermined course of action and inquire into its dimensions. We will first present a comprehensive definition of each dimension of a plan. At the end of each discussion of a given dimension, we will show the relationship of the dimension to the planning process as outlined in Chapter 1. After all dimensions are studied as separate units, we show the interrelationship of various dimensions to the planning process. All plans have the following dimensions:

1. Complexity
2. Significance
3. Comprehensiveness
4. Time
5. Specificity
6. Completeness
7. Flexibility
8. Frequency
9. Confidential nature
10. Formality
11. Authorization
12. Ease of implementation
13. Ease of control

COMPLEXITY

One of the most easily recognized dimensions of a plan is the degree of simplicity or complexity found within and between its components. Some rather simple plans might include the replacement of a few standard pieces of shop equipment with equipment of similar design or the scheduling of vacations within the office group. A more complex plan could be one which provides for the production and marketing of a new product which represents a departure from the standard product line. The simplicity or complexity of a plan is conditioned by many factors. The more important ones are the number of parts within the plan and the interdependence of these parts, the number of variables to be considered in arriving at a decision about each component, precise guides available to help management in choosing alternatives, the technical nature of the subject matter being considered, and the ease with which master plans and components can be subdivided into more manageable units.

Number of parts within the plan

The number of parts or subparts which appear in a final plan is not the measure to be used here. Frequently a complex plan becomes more simple by the mere act of breaking the total plan into more manageable subunits. This problem of ease or difficulty of subdividing a plan is discussed later. We are concerned here with what might best be called components which are logically distinct and identifiable within themselves, but which need to be coordinated into a final total plan. For example, a major marketing plan for a given year could include a realignment of sales territories, reassignment of accounts, expansion of sales personnel, a market analysis, an advertising campaign using several media, and a special sales contest. Or, the marketing program could be limited to a new advertising campaign with the other functions being carried over

pretty much intact from the previous year. The person responsible for formulating the first plan will find that the total complexity of his job is greater than the sum of its parts. This is true because each part is not an entity within itself but influences all other parts, and thus its impact must be evaluated when other parts are considered. To the extent that a company is working with scarce resources, say a limited budget, the problem is increased because of the need to allocate these resources to the various components on a basis that will maximize return.

We could further complicate our first illustration by including a change in product design, both appearance and form, and package design along with a new pricing policy and new channels of distribution. It is not just the numerical increase in the number of distinct subunits of the plan that is important here but also the probable crossing of functional organization lines. At least in the case of product and package design, we could expect to have personnel from a research and development department take an active interest. The need for coordination between research and development and the marketing department should be clear. The need for each department to understand what the other is doing, and the need to adjust its thinking to its role as it relates to the over-all plan complicates the plan at this level. When a person or unit above these cooperating departments has final authority for formulating or at least approving the plan, the process becomes increasingly complex.

Number of alternatives to consider for each component

A second factor which tends to complicate a plan is the number of alternatives one may choose from in deciding upon a given course of action. This is not to be confused with the factor or number of components previously referred to, but rather the number of choices within each agreed upon component of the plan. Let us use the same example as above and abstract from it the item new channels of distribution. If we had been selling primarily through full-line wholesalers in the past, we may now wish to consider many other alternatives. After a quick survey of all possible channels, we might wish to restrict our more exhaustive analysis to selling direct to retailers, setting up company owned and operated retail stores, leased departments within nonowned stores, and door-to-door selling. Having to evaluate all of these possible channels of distribution complicates the planning process beyond what it would have been had we decided to limit our study to full-line wholesalers.

Of course, we can carry this analysis a step further and note that each of these alternatives, in turn, may require a few or many additional alternatives to be considered. For example, in examining the possibility of selling direct to retailers, we might wish to consider full-line retailers,

specialty shops, and chain stores versus independent stores to name but a few of all possible choices. The larger the number of alternatives we find within components and subcomponents, the more complex the overall planning process becomes.

In attempting to decide the superiority of one alternative over another, the planner will be guided by certain variables pertinent to the problem under consideration. One component of a purchasing plan may be the selection of one or more vendors. The factors (variables) to be considered in choosing a vendor might be cost, reliability, quality of product and service. To the extent that fewer or more variables are considered, the complexity would change. The degree of change, of course, is seldom proportional to the number of variables considered. Usually, however, a plan becomes more complex as additional variables are considered.

Precise guides to help management choose alternatives

This is an elusive concept because it has overtones of the two items already considered, and yet it is quite distinct within itself. In formulating a plan, the planner should first consider the stated objectives of the firm and the department to which the plan applies. He may next consider the written and implied policies at all levels which pertain to the areas of his planning problem. To the extent that all necessary objectives are expressed in unequivocal terms and policy statements cover most components within the plan, the area of judgment to be exercised by the planner is reduced and the planning process becomes less complex (in some cases almost routine) than it would be without the guides available to him. Policy statements by government agencies and competitors can also serve as general, and at times specific, guides. The minimum wage requirement may dictate the level below which the wage administrator would not go in considering the level of a wage curve.

Note that the emphasis here has not been upon the technical nature of the material to be used or the number of alternatives to be considered but rather the guides that are available to the planner assuming the above two items are constants.

Technical nature of the subject

Perhaps we should make a distinction here between a plan which is complex because of the nature of the subject matter as such and the same plan which is more or less complex depending upon the planner and other factors within the organization. In other words is the complexity of a plan chiefly a function of the technical components of the plan? Without debating this point, let us first show how a plan replete

with technical components may actually be far less complex a problem for the planner than one might suppose. Let us recall the illustration of the marketing department head who decided to include within his marketing plan for the next year a realignment of sales territories, the addition of 10 new salesmen, and a possible new pricing plan. Let us assume for the purpose of illustration that as vice-president of marketing he has final authority over these activities. Certainly each component itemized covers a technical subject area. There are at least four ways in which the vice-president of marketing might approach the preparation of his plan. He could decide to do the entire planning job himself in which case it would have maximum complexity for him. If he has a staff of specialists, he could possibly delegate each component of the plan to a subordinate, in which case his role in the planning procedure would be less complex. In a typical large corporation he could seek staff assistance from such departments as economic and market research, and personnel. They may provide him with a finished plan as well as expert advice. Having this assistance available and using it will reduce the complexity of the planner's job. Lastly, he could seek advice from outside consultants, which would result in the reduction in complexity of the planning process for him. In all cases the technical nature of the components of the plan remained the same but the role of the planner was changed significantly to the extent specialized assistance was available. The final decisions on the plan must still be made by the planner regardless of the assistance he may have received. At this crucial stage the full impact of the complexity of the plan will be felt.

The technical nature of the subject matter to be used in formulating the plan has a significant impact upon the complexity of a plan. The greatest impact is felt when the knowledge required for the adequate preparation of a plan is limited to a few persons either within or outside of the company. The knowledge is limited because the level of knowledge required is extremely high and it can be obtained only through many years of study and/or experience by a highly talented person. In the above example it was assumed that the planner might be able to obtain the assistance of staff personnel or consultants when faced with an extremely complex planning problem. We will shift our perspective now to the specialist who is given the assignment. His phase of the overall planning process may be highly complex to him even though he is the most advanced scholar in his field. This is often the case because he is frequently asked to push forward the science of his field. Much of the advanced work being undertaken in outer-space research would fall under this heading.

We have viewed complexity in two ways. We talked about a plan which may be complex in the pure sense because of its content. We

also talked about the way in which the planner may face up to the problem of formulating a plan which is complex in nature. We have introduced this second point here to illustrate that the dimension of a plan is important in our analysis not so much as a concept within itself but rather as it relates to and influences the planning process.

Divisibility of plan

Some plans by their very nature are easily separated into logical components. Each component may be so self-contained that it needs little or no coordination with other components and may be thought of almost as an independent plan. The most recent illustration used lends itself to at least one natural division. The realignment of the total sales territory will necessarily affect the number of sales personnel required for its coverage. Its major influence is in determining the exact number of salesmen to be hired to handle the territories. Once this is known even in a tentative way (and perhaps even in anticipation of this knowledge) the subordinate plan for hiring the salesmen can be formulated. The complexity of a plan tends to be reduced as it is divided into subunits.

Of course, the fact that a major plan can be divided into logical parts does not mean that it will be so divided. It may remain an integrated unit because the planner is not able to visualize it as made up of logical subunits or it may be his wish not to separate out components.

The complexity of a plan, and thus the planning process, is a function of the number of major components within a plan, the number of alternatives one would logically consider in evaluating each component, the various guides and assistance available in the form of stated objectives and policies and staff specialists and outside consultants, the technical nature of the subject being considered and the divisibility of the plan and its components.

The more complex plans become, the greater the likelihood that the planner could gain significant benefit from the following methods:

A. *Establish means for the early determination of the need for formulating a new plan or revising an existing plan.*

B. *Take special care to prepare the proposal in terms easily understood by the approving agent. This may include the use of nontechnical terms and examples to clarify the proposal.*

C. *Include on the planning staff representatives who possess the necessary technical knowledge and experience not possessed by the planner.*

D. *Include on the planning staff representatives from major organization units which will be affected by the plan.*

E. *Make formal contact with cooperating units to insure understanding of the nature of the project and the role to be played by the cooperating units.*

F. Use sophisticated tools for data collection and processing as well as for decision-making.

G. Subject significant components of the plan to careful tests to determine the soundness of the plan and to discover possible difficulties in attempting to gain approval.

H. Prepare the final plan so that it is not only technically accurate but also persuasive in nature and easy to understand by approving and implementing units.[1]

SIGNIFICANCE

Viewing planning as a universal concept, one cannot help but be impressed by the myriad plans managers at all levels live by each day on the job. Some will deal with new product additions, machinery replacement, new incentive systems or plant renovation, while others will cover vacation schedules, methods improvements and worker assignments. Although every plan contributes to the success of the enterprise, there are usually a few plans which are thought of as being key guides to future success. One useful way of assigning significance to a plan is to measure it by one of the following tests: 1) the total cost incident to the preparation and implementation of the plan, 2) the anticipated income or cost reduction expected to result directly or indirectly from the plan, or 3) the strategic nature of the plan or subplan to the over-all plan.

Cost of preparation and implementation

The function of machinery replacement may be the same, but the decision to replace a major portion of the factory equipment with an automatic fully-integrated production line is of quite a different magnitude than the replacement of a few pieces of equipment according to a set replacement schedule. It may well call for the establishment of an ad hoc committee to formulate all necessary plans, including the consideration of various alternative machine designs and the testing of the equipment. Previous machinery replacement plans may have been assigned to a production manager, works manager or general manager. The key point is that the nature of the plan calls for a planning process that is rather costly.

The costs in the above example would include the salaries paid the

[1] Note that the information contained in items *A* through *H* is a modification of the planning procedure presented in the first chapter. This modification was made to give the reader a clearer understanding of the relationship of each dimension to the planning procedure. A more detailed and specific relationship will be shown in future chapters.

To avoid burdensome repetition by presenting a full description of each appropriate step in the planning procedure for each dimension, only the appropriate numerals will be used for the remaining dimensions covered in this chapter.

various company participants and consultants, the general office cost incident to collecting and evaluating the necessary data, and all other costs that would not have occurred if the particular plan had not been prepared. We would also include here all costs, including salaries of participants, which would occur even if the particular plan were not prepared, but which are directly assignable to a given project.

Anticipated income or cost reduction

Plans are usually prepared because they are expected to result in increased revenue or reduced costs to the firm. This may occur in a very direct way. The introduction of a newly styled product or the replacement of costly, inefficient machinery may result in measured increases in sales and revenue and reduction in costs. On the other hand, many plans of great significance to a firm may have cost and revenue results which occur only indirectly. Many of the plans designed to provide a more agreeable work environment would be in this category. It is our thought that a qualified planner should always attempt to calculate the anticipated results of any proposed plan in dollar terms. This is important because a planner is usually dealing with scarce resources (time, effort, money, equipment) which often have multiple demands made upon them. The best possible way to evaluate relative cost and relative benefit is in monetary terms.

Strategic nature of the plan

We have been emphasizing plans which are of vital importance within themselves quite apart from their contribution to a larger plan. Let us examine a situation now which is almost the opposite of the above. This is the condition in which the plan or component of a plan is neither costly within itself, nor is it expected to result directly in increased revenue; but it is of great significance because of its strategic role within the overall program. In a comprehensive salary administration program, the key component is often the plan for evaluating positions in the organization. In setting up a new system of work standards, the time study technique selected may be the key factor. In establishing a new budgetary control system, standard cost may be the critical factor. The important point here is that within a plan there is usually a hierarchy of components based upon their contribution to the total plan. This is true whether the plan itself is of great or little significance to the company. In relating the dimension significance to the planning process we will omit consideration of the strategic components of a plan when the plan itself is relatively unimportant. We will be thinking in terms of a significant plan as outlined above (points one and two).

Significance is a function of the actual cost of preparing and implementing a plan, anticipated savings or revenue expected to result from the plan, and the strategic nature of the plan or its components.

The more significant plans become, the greater the likelihood that the planner could gain substantial benefit from items *A* through *H*. (See footnote 1.)

COMPREHENSIVENESS

There are many possible definitions of the concept of comprehensiveness. Rather than attempt to explain what we do not mean by this concept, we will give our interpretation of this concept.

We view a plan as becoming more comprehensive as it crosses organizational lines both within a department and between departments. One of the least comprehensive plans could be one designed to introduce a new layout for a tool crib for a maintenance section within a production department. A more comprehensive plan would be one for a new compensation program or a plan designed to house the entire company in a new building. Within this range, plans may vary by the extent of their influence vertically or within a department and horizontally or between two or more departments. In the vertical influence a plan tends to become more comprehensive as it moves up the organization ladder within a department. The capstone would be department plans. Similarly, a plan becomes broader in scope as it extends beyond one department. The more additional departments it includes, the more comprehensive the plan becomes. A plan which embraces the entire enterprise is the most comprehensive. We are not concerned here with the complexity or significance of a plan but only with the number of separate units within the organization which will be influenced by the plan.

The degree of comprehensiveness of a plan is a function of the level within an organization where the plan is formulated, coordinated and controlled. The more comprehensive plans become, the greater the likelihood that the planner could gain significant benefit from items *A, B, C, D, E, G,* and *H*. (See footnote 1.)

TIME

Time as an element in planning has at least four important parts. It can be thought of as the preparation time required for developing a plan, the lead time required for beginning work on major portions, the time required for full implementation of a plan, and the distance ahead one wishes to anticipate the future as a basis for general planning.

Preparation time

Frequently an executive has within his own mind or within the minds of his subordinates most of the information needed for the formulation of a simple, informal plan. The time and effort required for assembling the needed information is negligible. The interpretation of the data, the mental weighing of alternative courses of action, and the act of deciding upon a specific course of action may be a matter of minutes or hours.

As the components of a plan increase in complexity and comprehensiveness, the preparation time tends to become prolonged. There are several reasons for this. A complex plan will frequently require the gathering and interpretation of information which is not readily available within the organizational unit where the plan is being formulated or even within the company. It may be advisable to make an economic forecast and conduct a market analysis in order to obtain the required information. Under either or both conditions, the decision time will have to be postponed until the required data becomes available. As a plan tends to have an influence over two or more departments—say production, and research and development—a further time loss may be introduced. Frequently a plan of this type will require interdepartmental participation at one or more stages of the planning process—the gathering of information, interpretation of the data, establishment and evaluation of alternatives, and the final decision on a plan. The use of a committee, rather than a single decision-maker, tends to prolong the planning process.

There are various other factors which may influence the preparation time. Some of the more important ones are explicitness and completeness of all statements of objectives and policies, the importance of the plan in terms of cost or contribution to profits, the need for a quick decision, and the experience of all personnel of the enterprise in the planning process.

Lead time required for major portions of plan to get underway

Lead time can be viewed from two vantage points: a major plan can be thought of as a single integrated unit, or each major component can be thought of as a semi-independent plan with recognition given to its part in the overall plan.

The major portion of a plan may often have to wait weeks, months and even years before it can be implemented. This is frequently the case when a number of derivative plans must first be implemented before the major plan can be initiated. For example, a plan to place a new

product on the market may require—among other things—the purchase of raw material, parts and supplies; the acquisition and installation of machinery and equipment; and the possible erection of a building to house the new operation. Before the actual production plan can be put into effect, all the aforementioned plans must be completed. Thus one way of looking at lead time is to consider it as the total time required for all other necessary components to be performed before action can be taken on the major component under consideration.

There is value in viewing all parts of a plan, including derivative plans, as components of a master plan. This is particularly true when viewed from the vantage point of the person responsible for the overall plan. For it points out the interdependency of many components of a plan and the need for higher level coordination and direction of the master plan. We think there is some value, however, in viewing as well the various components as plans within themselves. This is particularly useful where separate departments are responsible for major components of the master plan. Before the production department can carry out its plan, the purchasing and stores and engineering departments will have to perform their functions, not to mention the personnel department if new workers or new skills are needed, or finance department if long-term financing is required. Each department has a distinct responsibility of its own.

This approach places responsibility upon each department for the implementation of its plan whether it be complete within itself or a part of a larger plan. When using this more restricted approach, the lead time can be thought of as the getting ready time. For example, if goods are to be purchased, a building to be constructed, or a consultant hired to install a new cost system, contact must be made with the parties who will be contracted with to perform the actual work. The actual time required may vary from a few minutes or hours in the case of a routine purchase order to weeks or even months when a major installation is to be constructed. It should be evident that whether we talk about single components or an entire coordinated plan, the getting ready period will be required.

Probably the most important factor influencing the lead time required between the development of a specific plan and the start of its implementation is the availability within the organization of the physical, human and economic resources needed for giving life to the plan. It is usually true that the more an organizational unit is dependent on some other unit—either within or outside of the company—to perform preliminary functions, the longer the lead time requirement. Lead time is a function also of the complexity, comprehensiveness and uniqueness of the plan.

Full implementation of a plan

This time element is best thought of as the period between the start of the implementation of a plan and its completion. To be fully consistent with our description under lead time, we should emphasize again that one might regard major plans which require interdepartmental and intercompany cooperation in two ways. On the one hand, the entire plan can be viewed and studied as a single all-encompassing plan with the component parts being incidental to the total plan. On the other hand, when there is a logical division in the over-all plan along with the assignment of authority and responsibility for implementation of the plan, one can treat each major component as a plan within its own right without losing sight of its subordinate role to the total plan. This is a very important point in understanding the planning concept because as one moves upward vertically and crosswise horizontally, most plans tend to fall in the master plan classification. This means, in a practical sense, that the most important plans developed and exploited by an enterprise are prepared and implemented by several departments each with primary responsibility for a vital but limited part of the overall scheme.

One of the most useful ways to look at a plan is from the point of view of each executive responsible for its implementation. His concern is with getting the job done on schedule. Our concern is with the originally scheduled time and not with the actual time taken which will be discussed in a later chapter. Note also that we are not talking about the getting-ready time as explained in the previous section, but the time required for installing a job evaluation system, producing 100,000 units or changing the plant layout.

The actual time scheduled in the original plan may have resulted from the consideration of at least three major factors. The first factor would be the time it would take under normal conditions to carry out the various parts of the plan. For example, if the plan called for the acquisition and installation of five new pieces of equipment, a delivery date estimate would be obtained from a vendor. The anticipated time required by purchasing and plant engineering—let us say—for getting the equipment purchased, installed and ready for production would then be determined. When a plan or a portion of a plan is so scheduled, we can say it is a function of the standard time for producing and shipping the equipment by the vendor, the vendor's own production commitments, and the estimated time for installation.

A second approach could be one based on priority in which management decides it must, or at least wishes to have, the equipment bought and installed by a certain date earlier than the previously scheduled time would allow. Let us assume that the time desired is four weeks rather

than six weeks. This new time from the need or desired point of view becomes a function of, among other things, the company's willingness and ability to pay and the supplier's willingness and ability to furnish the desired units.

The third case would find a scheduled period longer than either of the above periods. A significant difference between the normal time required and the actual scheduled time may be caused by the lack of ready funds to purchase the desired equipment or underwrite the necessary activities. It may simply mean that there is no immediate need for the equipment and that the company can wait weeks or months before placing an order.

In summary fashion it could be stated that the scheduled time for the completion of a plan or a phase of a plan is a function of the resources, human and material, within and outside of the company, economic significance of the plan and the availability of funds by the company sufficient for the completion of the project. Note that it is not infrequent that a formal plan is allowed to remain dormant for weeks or months before any action is taken, preliminary or otherwise. But this is part of the company's strategy. The plan is held ready for implementation at the most propitious time. An alert management competing in an economic environment characterized by uncertainty may have several alternate plans held in readiness. The selection and implementation of a given plan from this arsenal is conditioned by the forces at play in the market in which the company competes. This delay between the design of a plan and its use is not what we call lead time.

Note also that each plan has a normal life expectancy which can be thought of as an important time element. A financial budget, for example, may be prepared yearly while a building design will be more permanent. Because of the importance of this concept and because of its unique characteristics, we cover this concept under a separate dimension called frequency.

Looking ahead—long range

The final time element to be examined is concerned with the number of weeks, months or years ahead management might wish to view before formulating general or specific plans. Much of the literature on planning seeks to make a distinction between short- and long-range planning. Long-range planning is usually thought of as extending five years or longer, with some going 10 years and a few as much as 20 years. There is one basic point which should be made clear about long-range planning. A plan may extend for several months or years because the implementation of the plan may take this much time. For example, the erection of a major factory, office building or bridge may take several years

before it is ready for use. This time function of planning was covered under the previous section. Here we are concerned with the problem of attempting to predict the kind of environment the enterprise will be facing—political, economic, social and ideological—at some distant point in the future. With this knowledge, intelligent long-range planning can begin. This is not to say that a long-range plan does not have to concern itself with these problems and perhaps build flexibility into its plans. Rather it is to emphasize that even when the total period between the beginning of research which forms the basis for most plans to the final completion of all phases of each plan is relatively short, an enterprise may wish to look much further into the future.

The kinds of questions an enterprise may wish to have answered are: What will be the Federal government's attitude toward a balanced budget, assisting underdeveloped countries, working toward maintaining full employment, big business, union monopoly, corporate and personal taxation? What will unions' attitudes be toward office and shop automation, the length of the work day and week, extension of existing fringe benefits such as supplemental unemployment compensation and life insurance, and addition of new fringe benefits? What will be the attitude of citizens toward work versus leisure, big government, big business, big unions? What will be the size of the total population, the size of families, the distribution of wealth among all classes, the buying habits of all classes? What will be the action of competitors in the areas of product diversification, pricing, merchandising, automation and the like?

The above examples are presented as a very limited sample of the kinds of questions an alert management might wish to have answered in order to assist it in long-range planning. An interesting twist has developed in recent years, and all signs indicate that it will continue in the foreseeable future. Management is viewing the future and projecting trends not only to help in formulating plans to meet future conditions, but, in addition, it is working to influence these conditions. This trend manifests itself most strikingly in the spreading interest of businessmen in political action. Greatest attention is being focused on such general areas as the roles of unions and government in the free enterprise system. In a sense, a large segment of American management has decided upon long-range objectives for its group and is formulating plans for accomplishing these objectives. It will be interesting to note in the future the contribution this movement will make to the general field of long-range planning.

In a practical way, many executives state that they plan no longer in the future than the period for which reasonably accurate data can be acquired. This period varies, of course, between and within companies. Others claim to go farther in a general way but admit to using such data only as an extension of more concrete facts and expectations. Thus a five-

year plan may be used as a guide with only the first year or two serving as the basis for a specific plan. As each succeeding year passes, a new year is added and all other years are brought up to date in light of changing conditions.

A future chapter will deal with the problem of anticipation of the economic, social, political and ideological environment a company will face in future time periods. Suffice it to say at this time that the number of years management wishes to look ahead for planning purposes is a function of the degree of reliability it can place in the data accumulated, the need for rather precise information regarding the future, and the cost of obtaining this information. In turn, the need for precise information regarding future events is a function of the length of the planning cycle, the degree of flexibility that can be built into the plan, and the cost that may well result from inaccurate plans.

Time as a dimension of a plan is a function of the time required for preparation of the plan, the lead time required for major portions of a plan to get under way, the time required for full implementation of a plan and the total future time period used as a basis for planning.

The longer the total period of time required for the full preparation and implementation of the plan, the greater the likelihood that the planner could gain significant benefit from items *A* through *H*. (See footnote 1.)

SPECIFICITY

Components of a plan may be presented in a most general way or in specific, unequivocal terms. Some of the more important elements of a plan which are presented in various degrees of specificity are the time for the beginning and end of various parts of the plan, the quantity and quality of various components such as raw materials and parts to be purchased and/or produced, and the assignment of direct responsibility for the implementation, coordination and control of the plan and all of its component parts. Let us look at a few examples. A plan may call for the expenditure of $10,000 and state specifically that the funds are to be borrowed. It might further state that the funds are to be borrowed from a commercial bank with preference given to one of the banks within the local community. It might even name the bank. What can we learn from this illustration? First the assignment of $10,000 as the desired loan is quite specific. Note also that as we refined the original statement that the funds were to be borrowed, we went from general to specific. We should hasten to point out, however, that the first statement for many companies will be as specific in fact as the last statement for others. This may be

true because the first company may have a standing policy that for all loans under $15,000 local community banks are to be used. Further, the finance officer who negotiates loans knows that Bank A is the only local bank with whom the company does business. Under these conditions, we would say that specificity was implied in this element of the plan. This illustration highlights the fact that company policies and practices will provide much of the specificity that is not explicitly set forth within the plan. It points out one major danger in making a plan too general, however. A plan may not be carried out in the fashion envisioned by the planner, especially where planning is separate from performance, either because of the planner's ignorance of standard practice followed by the implementing unit or because of the lack of any specific direction and thus the reliance upon an improvised guide.

Let us take another example. A plan to expand sales by extending sales coverage into a new territory may contain a provision for adding 10 salesmen. This could be the only reference in the overall plan to the personnel need. A plan identical in scope for another company could expand this base statement to include reference to such things as qualifications desired of candidates, sources from which recruits should be solicited, induction and perhaps training programs for selectees and general compensation considerations. Again, the first plan which merely stated the need for 10 salesmen may have in fact implied specificity to equal the explicit specificity contained in the latter case. The first company may have a long-standing system in use for bringing in all new employees. The system may include the use of job titles, job descriptions, job specifications, preferred sources of recruits, and a selection system including interviews and psychological testing. It may have a common induction system for all employees and a special training program for all new salesmen. The compensation system may follow a company-wide job evaluation system which established a base rate for all jobs or groups of jobs within the company. Thus there is no need to present the plan in any greater detail than to state that 10 salesmen are needed by August 1. This is so because procedures are already established for carrying out the major components of the total plan.

In discussing the concept of specificity in a plan, we are confronted with the very real problem of deciding when certain organized data actually becomes a plan. This question is pertinent for two conditions associated with most major plans. One is the hierarchical level from which the major plan emanates. The second is the time lag between the initial formulation of plans and the day in which implementation is to begin. Either or both of the above situations are further complicated when specifics within a given plan or components of a plan are influenced by other plans or components to be decided upon within other departments.

For our purposes, let us consider that a plan officially comes into being when final approval is given by management at a level high enough to authorize its implementation. Note that the time of the implementation may be deferred to some period in the future.

With this definition in mind, we can say that a component of a plan or a total plan becomes more specific (at least as to its implementation) as it moves down the organization ladder to the point of direct implementation. This tendency has been increased in recent years with the prevailing philosophy that decisions should be made as far down the organization ladder as is practicable. Thus a plan sketched in broad terms at higher levels will usually get more specific as it moves to the point of accomplishment.

There is one other difficult point that should be made about specificity as it relates to plans and components of plans. A distinction should be made between a major component of a plan and the means provided for its implementation. A plan may call for the replacement of certain manually operated office equipment with electronic data processing equipment, the addition of 10 new salesmen or the movement of the company equipment to a new plant within the state. These statements are rather specific but are certainly insufficient for a complete plan of operation.

In regard to specificity of plans and the element of time, we can say that plans usually become increasingly specific as the date of approval approaches. This does not necessarily mean that the finally approved plan will be presented in specific terms, but only that it is usually more specific than at a previous time in the planning stages.

Frequently, however, a plan is held in readiness without a specific target date set for its implementation. Under these circumstances, the components of the plan may be purposely presented in more general terms to allow for flexibility should conditions call for a change in strategy. When the time comes for its implementation, specific guides will then be formulated.

Finally, the very nature of the subject matter being planned will have a significant impact on the specificity of plans. The plan to be followed in designing a new product, a new training or management development program may be formulated in very general terms as to expected outcome.

Expressed specificity within a final plan is a function of the adequacy of existing company policies and procedures, the time lag between the formal adoption of a plan and the anticipated date of implementation, the importance of the plan to the company, the level within the organization where it is prepared and approved, and the nature of the components of the plan.

The *less* specific the plan or its components, the greater the likelihood that the planner could gain significant benefit from items *A*, *B*, *C*, *D*, *E*, *G*, and *H*. (See footnote 1.)

COMPLETENESS

Some implied reference was made to the dimension completeness when we discussed comprehensiveness, time and specificity. Yet this concept is important enough to be considered separately. A complete plan would be one which includes all necessary components for proper judgment to be passed on its adoption or rejection and for its expeditious implementation.

A proposed plan may be incomplete for two major reasons. There may be significant omissions such as the lack of a budget or estimate of time required for its implementation. Or all required elements might be covered, but some components may be incomplete. A budget could be incorporated in the body of the plan, but it may not include all significant items of cost or expense. Similarly, a time schedule might omit such important items as estimates of time required to purchase needed raw materials and parts. The one omission we could classify as failure to consider all significant parts and the other as a failure to present all necessary data relating to one or more parts.

There may be justifiable reasons for either type of omission. Intelligent judgment can often be passed on a plan which lacks direct reference to one or more components because these components, although important, can be considered at a future date even after parts of the overall plan have been implemented. The same justification can be given for the failure to present all the necessary data for each component. There are times, of course, when the information desired is simply not available or too costly to obtain as could be the case when a new product is being introduced without adequate study of the market.

Inadequate plans may be presented for reasons that are less justifiable. The initial directive, actual or implied, authorizing the preparation of the plan may have been vague or ambiguous in outlining the scope of the project. Provision may not have been made for insuring cooperation between departments, making it difficult to obtain much needed information. The assignment may have been made to unqualified personnel, thus resulting in a less than adequate study. Too small a budget may have been allocated to the project, thus restricting the scope of the study or the amount of analysis that had been expected. Regardless of the reasons for an incomplete plan, management should recognize that the lack of complete information cannot help but lessen the effectiveness of the plan.

Completeness is a function of the preciseness and comprehensiveness with which the directive authorizing the study is prepared, the qualifications of the planners, the adequacy of the budget provided for conducting the study and the nature of the material studied.

We have illustrated some of the reasons why a plan may be incomplete. We discussed reasons attributable to poor planning, such as the initial directions being vague or ambiguous or the planning job having been assigned to unqualified personnel. This discussion was presented simply to highlight some of the improper ways in which the planning process could be handled. Our major emphasis, however, is upon the problem of incompleteness which results from causes other than poor planning. Our approach throughout the first half of this chapter—and it will be used for the remainder of the chapter—is to view each dimension from the point of view of its natural elements. That is, a plan is complex, comprehensive or significant not because it is properly or improperly planned but because of its natural composition. The perspective in time has been the first awareness that a plan may need revision. The person who becomes aware of the need and who may wish to begin planning (or to submit a proposal for a plan if he does not have authority to initiate preparation of a plan) should attempt to visualize the impact of the plan under consideration upon all phases of the planning process. For example, in view of the nature of the plan (complexity, comprehensiveness, or significance) he would consider its influence upon such things as the size and composition of the planning staff and the way in which contact will be made with cooperating units.

In relating the dimension completeness to the planning process, we emphasize the incompleteness of a plan which may result from such a thing as lack of available data, either because it is nonexistent or because it is prohibitive in time, money or effort to obtain. In a very real sense, the planner anticipates this in advance and conditions his planning process to take care of this possible problem.

The *less* complete the plan or its components, the greater the likelihood that the planner will gain significant benefit from items *A, B, C, D, E, G* and *H*. (See footnote 1.)

FLEXIBILITY

For a plan to have maximum value to a company, it should reflect the best possible guides management can use to maximize its objectives. As we have noticed previously, a large number of elements within many plans can be classified as fluid in nature or subject to change rather than

static. There are other elements within a plan, machine or building specifications, for example, which appear to be highly inflexible. And yet even here we find that flexibility is frequently built into the design, even though the design as an element of the plan is static. For example, a multipurpose rather than a single or special purpose machine might be requisitioned, or a building design may call for removable partitioning. In each case, flexibility is incorporated in the design although the design itself may be inflexible as a component of the plan.

The flexibility of a plan is conditioned by many factors. The more important ones are the object itself, the plan as a unit or components of a plan. Flexibility may take several forms: the object itself may be flexible, the plan as a unit may be flexible or only certain components of the plan may be flexible.

Flexibility within the object

To avoid confusion on this point, let us say again that this concept applies to actual objects within the plan rather than the plan as an instrument to be used as a guide. The value of including this thought here is that it emphasizes that the degree of flexibility desired within a plan is influenced by the built-in flexibility of the substance of the plan. One need be less concerned about the flexibility of a plan when the object can be accommodated to a variety of changing conditions. We have already mentioned multipurpose machines and removable partitioning within a building as examples. Some other examples would include a salary administration system that allows for changing market conditions, including the addition of new positions within the program; a product line that would allow maximum interchange of parts and considerable use of the same raw materials; a personnel plan, such as job enlargement, which would provide ease of movement between jobs should conditions warrant such a change.

Plan as a unit

Sometimes components of a plan are so intimately related that a change in any significant component will require changes in other components. When this condition exists, a company may find it useful to have two or more plans ready to be introduced in the event a change is needed. A variable budget is a good example. Other examples could include an advertising program where the theme would vary from luxury appeal to functional to economy through three distinct programs. At the opportune moment the new plan could be substituted for the plan currently in use.

Each plan would be totally different from the others in layout, copy color and media to be used.

Components of a plan

The major difference between this concept and the one just examined is that of scope. Most of what is said about one can be said about the other except that the impact of a change in a component as we think of it here would have little or no effect on other components. For example, the acquisition of certain raw materials might be vital to the success of the entire basic program for the year. Management's concern could be expressed in the provision of alternate sources of supply. At the moment management becomes aware of possible future delay from his prime supplier, he can negotiate with a second or third supplier. The change in source of supply should have little effect upon the other major components of the plan, i.e., production and marketing. Note that we are not saying that the failure to acquire necessary raw materials would have no effect upon marketing and production. Rather, we are indicating that a shift in supplier need have no effect.

Let us take an example from the distribution end. Assume that we are granting exclusive franchises to a given type of retailer, such as department stores, within each major city. We might wish to keep on record the preferred first and second alternate within the city in the event we should wish to change distributors with little delay. If we make such a change, it should not have significant repercussions upon our production, finance, or marketing departments except perhaps in a procedural sense.

The need for flexibility in plans is particularly acute when the absence of flexibility would cause serious loss to the company. It should be emphasized that management will frequently use a variety of devices in addition to flexible plans to protect itself from unexpected events, or to allow itself to take fullest advantage of new developments. The basic policies, including provision for change, of the company, the philosophy of management, the caliber and work habits of executives, the buying and selling practices followed, and the financial structure may all contribute to the total flexibility of the enterprise. All of these areas are important because they tend to gauge the total flexibility that can be brought to bear when unexpected events occur. Such a company, possessing a high degree of flexibility, may refrain from preparing alternate plans, thinking that its total organization provides it with necessary flexibility.

Flexibility is a function of the restricted use of items contained within a plan, the provisions within a plan of alternate courses of action, and the rigidity of the planning process.

The greater the flexibility of the plan or its components, the greater the likelihood that the planner can gain significant benefit from items *B*, *C*, *D*, *E*, *G*, and *H*. (See footnote 1.)

FREQUENCY

The concept of frequency is one of the most important dimensions of a plan. By frequency, we mean the number of times a given type of plan is prepared. Some plans are prepared on a continuous basis while others occur once or a few times in the life of an enterprise. The least frequent plan, of course, is the one which occurs once with little expectation of its reoccurrence. The starting of a business venture or the movement of a company from one geographic section of the country to another would fall within this category. On the other extreme, we may have almost continuous planning in the sense that the completion of one plan generates the need for the beginning of a second plan. In practice, if we were to think about planning along a given functional line, say product planning, we could even visualize several plans developing simultaneously with the various plans completed at different time periods. Work of a planning nature would continue without respect to any specific plan.

There is danger of ambiguity at this point since it is easy to confuse the continuous nature of a planning section within an organization and a continuous plan as we wish to have it understood. The existence of a department or section within a company having at least the implied authority for planning suggests that planning is performed continuously. This may very well be the case. We note, however, that while planning is continuous, it may not be related to a given plan but rather diffused over many plans which may not be intimately related. Another way of looking at this same issue is from the standpoint of an executive within the upper levels of the organization. Certainly, he engages in planning as a continuous function. Almost as certainly, his planning activities will cover a variety of separate plans. Some of these plans will cover situations which may not occur again. Others will be recurring, thus requiring new plans of the same type in the future. The central concept—since we are concerned with the executive's job of planning at all levels of the organization—is the frequency with which a given type of plan is formulated.

Most plans fall between the two extremes illustrated thus far. The establishment of a compensation program for executives, acquisition of electronic data processing equipment, or realignment of sales territories will result from a distinct plan. The need for a new plan to cover these situations may not reoccur for months or years.

The continuousness of the planning function along a given type of plan is a function of the degree of permanence associated with the elements of each plan, the dynamics of the economy, the company's policy regarding innovation and its leadership role in industry, and the total capacity of the firm, human and material.

A plan which may appear to have a certain life expectancy, say, a year, and is so scheduled, may actually be revised or discontinued before completion date to meet unanticipated conditions. The more frequently a specific type of plan is formulated, the greater the likelihood that the planner could gain significant benefit from *C*, *D* or *F*. (See footnote 1.)

CONFIDENTIAL NATURE

We use the term confidential here to suggest situations in which the contents of a plan or the entire plan are not to be known to anyone except authorized personnel. There are at least three major situations a manager usually wishes to guard against. The first is a possible competitive loss which could result from having one's competitors get advanced information regarding one's product style, change in price policy or merchandise strategy. There are a surprisingly large number of plans within most companies which would be seriously compromised if they were known by competitors in advance of their official disclosure.

The second type of plans are those which are thought of as confidential because of their personal nature and for the additional reason that they provide management with greater flexibility over the activity covered. If these plans were known, unnecessary complications might well result. Typical examples would be the executive compensation plans and executive promotion plans.

Because of the confidential nature of these various plans we may find responsibility for their preparation placed relatively high in the organization and restricted to fewer employees than would normally occur. Frequently they may be handled by outside consultants to provide greater secrecy.

The third broad type of confidential plans are those which would result in serious embarrassment, loss of goodwill or possible reduction in morale of affected persons. One way to get perspective on the variety of persons who may be affected by a plan is to think in terms of the different groups of people a company is dependent upon for maintenance of its economic health. Note that we are concerned here with two parts of one problem. The plan itself, because of its very nature, may be received with displeasure by one or more groups affected. For example, the decision to

close down a factory and move its operations to another state is usually received with considerable alarm by employees, the union, the community and the local and state governments. This is to be expected and should be provided for in the plan.

The other aspect of the problem is the unnecessary complications which result from the premature disclosure or "leaking out" of fragments of the plan before the company is prepared to announce its complete plan.

An ideal condition exists when a manager is able to formulate all confidential plans with complete secrecy except for the few persons engaged in preparing the plan. Using the example of a contemplated move to another state, we would expect the final plan to cover all vital areas. Provision might be made for, among other things, transfer of employees to the new location, severance pay for those not able or not willing to go, assisting in placement of workers with other companies, phase-out of production over a scheduled period, and attempting to attract a company interested in taking over and operating facilities which will be left behind. This is not necessarily a recommended plan but is presented to show that enlightened management can prepare itself to meet the outcries that are most certain to come. Think of the superior position management is in when it can couple its announcement of the decision to move with an exhaustive plan of how it intends to make the transition. Let us emphasize that a given management might take the attitude "the public be damned" and not wish to prepare even the few plans listed above. This is not our concern. We state simply that a company is in a better position to face its "people" if it announces its own plans, whatever they may be, rather than having to defend itself against rumors, misrepresentation and fabrications.

The confidential dimension is a function of the competitive advantage that lies in secrecy, the extent of illwill that would be created among all persons connected with the company if the plans were known in advance, and the personal nature of the information contained in the plan.

The more confidential plans become, the greater the likelihood that the planner could gain significant benefit from items *A*, *B*, *C*, *E*, *G* and *H*. (See footnote 1.)

FORMALITY

This concept covers each major phase or part of the total planning and performance process. For convenience, we can divide it into five parts: authorization of the study, preparation of the plan, approval of the plan, implementation of the plan, and control of the plan.

Authorization of the study

A very large number of plans are initiated by all levels of management by the simple personal decision to have the study done. The specific assigning of the project can be by word of mouth with a few written notes taken at the time of the announcement. As a plan becomes more significant and comprehensive, we generally find authorization taking the form of a formal document, usually prepared according to established procedure and carrying the signatures of at least two levels of management.

Preparation of the plan

The gathering and analysis of data and the final preparation of the plan tend to follow somewhat the same pattern. A fairly simple, restricted plan can usually be formulated through personal contact of an informal nature where the necessary material is recorded in rather rough form. As a plan becomes more complex and extends across two or more departments, the entire process becomes more formal. The tools used tend to become more sophisticated and often include forecasting, market research, statistical analysis and more recently, mathematical models. The final plan is also presented in more structured form and is accompanied by formal budgets, blueprints and drawings and documented charts.

Approval of the plan

The approval of a simple, restricted plan is often done by word of mouth or by affixing one's signature to a statement. The decision to approve the plan may have been reached after informal conversation with various members of the department. At the other extreme, we may find a recommended plan debated at some length by a formal committee composed of representatives from all major departments. A special group of experts, particularly those responsible for formulating the plan, may appear several times before the committee, using a variety of visual aids to explain specifics of the proposal. The committee may then take formal action and recommend its adoption to the chief executive. Some plans, of course, require approval of the board of directors, and others, the stockholders. The approval at this level of the organization is done in most formal fashion and usually contains the signatures of several members of the executive hierarchy.

Implementation of the plan

Here we are concerned with the assigning of responsibility for carrying out all or certain parts of the overall plan. Under the simplest condi-

tions, we would expect the responsible executives to give each assignment personally, and perhaps verbally. A rough copy of the overall plan may be given along with a list of instructions. The more elaborate plans will frequently include departmental assignments within the body of the plan. The formal plan is then distributed to responsible organizational units. One useful way is to have committee meetings of participating units at various levels of the organization working from the top down.

Control of the plan

The last phase of the total process is that of control. We will restrict our attention here to the control exercised by the executive who approves the plan. Again from our procedure of going from the simplest, most restricted plan to the more complex and comprehensive, we find that control in the first instance tends to be a matter of personal check upon performance. Top management usually gauges progress by means of reports which measure performance against standards.

Formality thus is a function of the complexity, comprehensiveness, significance, and level of authorization of plans.

The greater the degree of formality of a plan the greater the likelihood that the planner could gain significant benefit from items *A* through *H*. (See footnote 1.)

AUTHORIZATION

With the multiplicity of plans within a large organization, care must be exercised to insure that only officially approved plans are prepared and implemented. This becomes a particularly important and difficult problem when a relatively large organization is concerned and many plans require cross-departmental cooperation, at least in granting necessary data for an integrated plan. It is easy to visualize some of the difficulties that might arise through the preparation and implementation of an unauthorized plan. Unauthorized confidential information might be obtained from a cooperating department, rumors having no foundation in fact might be started about company intentions, or changes may be made that are in opposition to stated company policy, to name but a few. On the positive side, when the legitimacy of the investigation is assured, we can expect unequivocal cooperation among all participating parties and the most expeditious handling of the planning process.

There are two major parts to this problem. One is the granting of initial authority for preparation of the plan. The other is approval of the prepared plan. We will treat these jointly except where specific reference to

one or the other will contribute to a better understanding of the problem.

Many plans are initiated on the expressed or implied authority assigned the position held by the initiator. For example, the head of the manufacturing department may have authority to initiate plans pertaining to machine layout, purchase of standard equipment, assignment of work to specific machines, inventory levels and other activities typically found within a large manufacturing department. When, under the above conditions, the department head takes action to have a given problem studied, he is acting under the formal authority of his position. Occasionally, an executive may be desirous of initiating a study but questions his authority to undertake it. To avoid possible friction with other departments and to protect his own position, he may go through channels to seek approval for his study. When, and if, approval is received, he has unquestioned authority to carry out his project. On occasion the process is reversed. A member of top management may take the initiative to suggest to a subordinate unit that a given plan be prepared. Under these conditions, the authority to conduct the study is specifically granted by the executive assigning the project.

Thus, a given plan may be authorized by the authority vested in the position of the person having responsibility for its initiation, or it may be authorized by specific action of a higher level of management. Note that this holds true at all levels within the organization. The first line foreman has an unquestioned scope of authority over certain activities. He may be assigned additional projects, or he may seek authorization from his general foreman or supervisor to perform activities not specifically stated in his job description. This same illustration could be used for all levels within the organization, even to the president of the company.

Not infrequently, an executive may initiate a study within an area in which his authority might be questioned. He may wish to have the study made even when he feels his immediate supervisor will likely disapprove the project because he anticipates that the results of the study will support his theoretical conclusions. At times he may have the unofficial approval of his superior with the understanding that if anything goes wrong the superior will disavow knowledge of the study. There are other times when an executive may act prematurely or hastily because of his desire to take advantage of what he interprets to be a short-lived opportunity. Perhaps a president feels that he cannot wait for the official meeting of the board of directors and it is too difficult to get their approval by any other means. A supervisor, on the other hand, may not wish to forego an opportunity or risk a disaster until his superior returns from vacation or an extended interplant visit.

Note the distinction we make between the executive who willfully

circumvents authority and the executive who uses his initiative in want of official sanction. A second distinction should be emphasized again. That is, the official authorization to initiate a study and the official approval of the final recommended plan. A company will usually find it significantly easier to protect itself against the unauthorized execution of the final plan, particularly when interdepartmental activities are involved, than the initiation of a study, since a change from current practice usually requires official approval as a matter of course.

Any attempt at curbing the formulation of unauthorized plans should include the obvious procedure of requiring that a study can be initiated only with approval of the superior of the person wishing to undertake the study. This could be refined to cover studies requiring interdepartmental cooperation. A second approach to this problem, since all procedures are subject to interpretation and circumvention, would be much broader in scope and would attempt to get at the real difficulty which is an act of the will. Why would an executive wish to disregard formal authority? It could be that his ideas have been disregarded in the past, an unreasonable delay resulted in his ideas becoming obsolete, or his ideas may have been usurped by his superior or others without his being granted recognition. These are but a few reasons why we might expect an employee to take his own initiative for preparing an unauthorized plan. The answer to this problem would require a significant change in the management philosophy of those associated with the situation. On the other hand, the person could be resentful of authority, or he might be an individualist who does not wish to share his ideas with others. In this case, the answer might be found in proper counseling by his superior.

The formal authorization of a given plan is a function of the significance of the plan, the confidential nature of the plan, the quantitative and qualitative nature of the cooperation required, the explicit authority of the planner, and the level within the organization in which the plan is to be prepared and implemented.

The more official a plan, the greater the likelihood that the planner could gain significant benefit from items *A*, *C*, *D*, and *E*. (See footnote 1.)

EASE OF IMPLEMENTATION

Once a plan has received official approval, it must be put into practice. We will look at the implementation of the plan only from the point of view of its impact upon the planning process. We believe that the successful carrying out of a given plan is significantly influenced by the content of the plan, of course, but also the way in which the plan was pre-

pared. What can management do, once it decides to follow a certain course of action, to insure that the implementation of the plan will be made easier? There would appear to be several major problems. The more important ones are the complexity of the subject matter, the technical nature of the plan, the planning process itself and the content of the plan.

Complexity of the subject matter

When one thinks in terms of new product development in the aircraft industry, the construction of a dam or the erection of a steel plant, he is impressed with the tremendous complexity of each plan. The best possible plan cannot eliminate the problems arising from such complexity, but it can help guarantee its most efficient accomplishment by providing the necessary resources and direction required for following the plan.

Technical nature of the plan

Here we are viewing the structure of the plan from a purely mechanical point of view. Let us even assume that the plan provides for all the resources—human, material, and financial—needed for the accomplishment of the assignment. The specific design of the plan can greatly aid in the efficient use of these resources. Those persons instrumental in preparing the plan should always bear in mind that it is a means to an end and not and end within itself. The most perfect plan will lie dormant until human activities put it into being. To this end, a plan should be in simple terms and should contain sufficient directness to enable each participant to perform his role with minimum verbal direction from others.

The planning process

It is a fairly well-accepted principle of motivation that employees tend to perform an assignment best when they feel personally responsible for its outcome, have a clear understanding of the purpose or objective of the assignment, and have had some part in the design of the assignment. To develop the best possible frame of mind of all parties concerned, the executive in charge of a plan will frequently solicit assistance from a variety of persons in the preparation of the plan. When it is not feasible to do this, the plan should contain sufficient explanation of its objectives to give each person responsible for its implementation a clear idea of the reason for the over-all plan. Ideally, the two suggestions offered above will be used along with a verbal introduction of the plan to all interested parties by the director.

Content of the plan

The basic provisions of a plan may be such as to preclude any emotional reaction by participants, or they may be so emotionally charged that its implementation may be complicated. A plan to replace old equipment with a new model of conventional design and performance, the expansion of the production capacity of a factory by building an addition to the present building, or the introduction of a new product may be handled without resistance. Other kinds of plans may engender violent reaction because of the actual or implied threat to one's position. Some examples of such plans are the replacement of conventional machinery and equipment by a fully automated battery of machinery resulting in the short-run displacement of personnel, the discontinuance of a long-standing activity such as maintenance or delivery departments by contracting the activity out, or the establishment of a wage or salary program and promotion plan. The answer to this problem may be found in part by following the recommendations suggested for facilitating implementation under the first three conditions—complex subject matter, technical nature of the plan, and planning process itself. When these recommendations are not sufficient, it may be prudent to assign the implementation stage to organization units other than those usually responsible for such assignments. The extreme case would be the bringing in of outside consultants.

The ease of implementation of a plan is a function of the complexity of the subject matter covered, the emotional response likely to be engendered in those responsible for its implementation, the internal logic of the plan, the way in which the planning process was performed, the completeness of the plan, and the specificity of the plan.

The greater the need for proper implementation of a plan, the greater the likelihood that the planner could gain significant benefit from items *A, B, C, D, E, G,* and *H.* (See footnote 1.)

EASE OF CONTROL

There is an important distinction to be made between implementation and control, as we are using these terms. We have viewed implementation of a plan from the point of view of the planning process, indicating what could be done to facilitate the introduction and accomplishment of the plan. We will now view control from the same perspective, the planning process, and indicate how the control function is influenced by various provisions within a plan. We view control as the actual measure of per-

formance against standards. Let us review the steps usually taken after the final approval of the plan. First the assignment is made to the units responsible for carrying out each component of the plan. Direction is then given to these units (frequently it is contained within the plan itself) by the person immediately in charge of the day to day performance of activities incident to the accomplishment of the plan. Thus, we have launched the plan. We are now interested in nursing the plan through the various stages of its development. This is where the control function comes in. Various levels of management will be interested in knowing how well the plan is progressing. Is the new addition to be finished on schedule? Is the personnel department meeting any particular or anticipated obstacles in attempting to add 10 new research engineers to the research and development department, or is the advertising program getting the anticipated response?

The use of effective controls is one of the best means of insuring that plans are performed as scheduled or at least adjusted to meet unanticipated conditions. The basic requirements for an effective control scheme would include a set of standards for each major component within the plan, a system for recording actual performance, a method for measuring variance from standard, a procedure for diagnosing reasons for significant variance, and provision for modifying the original plan, when necessary.

We might ask why the need for controls? Or what is there about a plan that suggests the need for controls? A useful way of answering these questions is to suggest the important areas in which actual performance may vary from standard or anticipated performance. The basic premises, internal and external, used by management in formulating plans may not be accurate, either because of a failure to properly interpret conditions or because the conditions have changed, or the plan itself may be technically inaccurate or incomplete.

Premises about internal conditions

Every plan is based upon certain assumptions about the future. Some obvious assumptions of an internal nature would include the expectation that work standards will remain constant during the implementation period, that machinery and equipment will be available as in the past, that employees will be available and they will produce in the customary way, and that sufficient funds will be available, as budgeted, to underwrite the project. One or all of these assumptions could be wrong. As the plan is being implemented, it may be discovered that the employees are performing at a reduced rate, either wilfully or because physical conditions incident to the implementation of the plan are such as to warrant

a new standard time. In either case, it may cause delay in the plan unless corrective action is taken.

Premises about external conditions

Two major outside forces condition the progress a company makes in getting a given plan into effect. The first would include all agencies which perform a function on a contract basis vital to the needs of the company, such as suppliers, distributors, advertising agencies, contractors and all consultants. The successful completion of a given project may be conditioned by the successful performance of one or all of the above groups. The second outside influence would be all other groups which would affect the company: government, consumers and competitors, as well as physical conditions such as rainfall and temperature variations.

In the first case, we are concerned with a group which has some form of contractual relationship with a company which binds them to a certain expected level of performance. The second group influences the company just as importantly but it has no obligation to perform as expected. This is the most difficult group to gauge because the standards it uses may not be known to its members, much less to the company concerned with the group's activities. For example, a major part of the success of a new product depends on a company's ability to guess what the consuming public wants in style and performance and what they are able and willing to pay. The basic assumption behind this program is that consumer buying habits are measurable and reasonably consistent. Either or both the art and science of consumer research has not reached such a level as to give the degree of confidence management would like. There are several good examples in recent economic history to show that this problem is yet to be solved.

Although a company may find it difficult to accurately predict certain future events, it should be able to prepare adequate standards to measure the degree to which its expectations are being realized. Knowing what to do about variation from expectation is often far more difficult than determining the fact that expectations are not being realized. When a vendor fails to meet his contract obligations, he may save the day by subcontracting the work. At least if his failure can be corrected, he can give a good estimate of future performance. This is a problem that is easily solved. At the other extreme, one may find considerable consumer resistance without particular knowledge as to the cause of poor consumer acceptance. The problem is then one of determining what corrective action is necessary without being sure of the reasons why the plan has failed, or even worse, not being reasonably sure of how consumers will react in the future if changes are made.

TABLE

RELATIONSHIP OF EACH DIMENSION

Planning Process	DIMENSIONS *Complexity* (G)	*Significance* (G)	*Comprehensiveness* (M)	*Timeliness* (L_L)	*Specificity* (L)
A. Establish means for the early determination of need for formulating a new plan or revising an existing plan.	X	X	X	X	X
B. Take special care to prepare the proposal in terms easily understood by the approving agent. This may include the use of non-technical terms and examples to clarify the proposal.	X	X	X	X	X
C. Include on the planning staff representatives who possess the necessary technical knowledge and experience not possessed by the planner.	X	X	X	X	X
D. Include on the planning staff representatives from major organization units which will be affected by the plan.	X	X	X	X	X
E. Make formal contact with cooperating units to insure understanding of the nature of the project and the role to be played by the cooperating units.	X	X	X	X	
F. Use sophisticated tools for data collection and processing as well as for decision-making.	X	X		X	
G. Subject significant components of the plan to careful tests to determine the soundness of the plan and to discover possible difficulties in attempting to gain approval of the plan.	X	X	X	X	X
H. Prepare the final plan in such a way that it is not only technically accurate but also persuasive in nature and easy to understand by approving and implementing units.	X	X	X	X	X

* G = Greater; M = More; L_L = Longer; L = Less.

TO VARIOUS PARTS OF THE PLANNING PROCESS

OF A PLAN *Completeness* (L)	*Flexibility* (G)	*Frequency* (M)	*Confidential/ nature* (M)	*Formality* (G)	*Authorization* (M)	*Ease of Implementation* (G)	*Ease of Control*[a] (G)[a]
X			X	X	X	X	X
X	X		X			X	
X	X	X	X	X	X	X	X
X	X	X		X	X	X	X
X	X		X	X	X	X	X
		X		X			
X	X		X	X		X	X
X	X		X	X		√X	X

There are two major approaches to be used in this kind of situation. One is to build flexibility into the plan so that adjustment can be made almost instantaneously. For example, a production plan with all the necessary corollary plans can be tied into a given level of sales. As sales fluctuate between certain prescribed levels, a different production plan is followed. The second approach is to use considerable pretesting of the plan to see how well given components function in a life-like environment.

Correctness and adequacy of the plan

Every major premise used by a planner may be accurate but the plan may fail because it has internal weaknesses. The design of a building, the timing of a sales program, the specifications for a machine or product, may all prove to be inaccurate in certain details. Occasionally, vital elements are missing from the plan, causing a breakdown. Responsibility for certain functions may not have been specifically assigned, resulting in having no work done or in having two or more units duplicating functions.

All of the above problems can be reduced by improving the planning process. Frequently, it is practically impossible to prepare the perfect plan. The important point is to discover inadequacies as quickly as possible and incorporate necessary changes so that the plan will function successfully.

Here, too, one finds that a dry-run or a series of tests will bring out unexpected deficiencies. Where plans are not subject to such tests, perhaps because of cost or time pressure, the next best approach is to personally observe the unfolding of the plan during the initial stage and during critical subsequent stages. When needed, because of the significance of that part of the plan, alternative courses of action should be available in advance of needs.

Ease of control is a function of the preciseness and accuracy with which premises can be established, the accuracy of the plan, the preciseness and accuracy with which standards of performance can be established, the nature of the planning process and the measuring tools available.

The greater the need for proper control of a plan, the greater the likelihood that the planner could gain significant benefit from items *A, C, D, E, G,* and *H.* (See footnote 1.)

INTEGRATION OF DIMENSIONS

Up to this point, we have treated each dimension separately, although noting at various times the influence of one upon another. At the end of

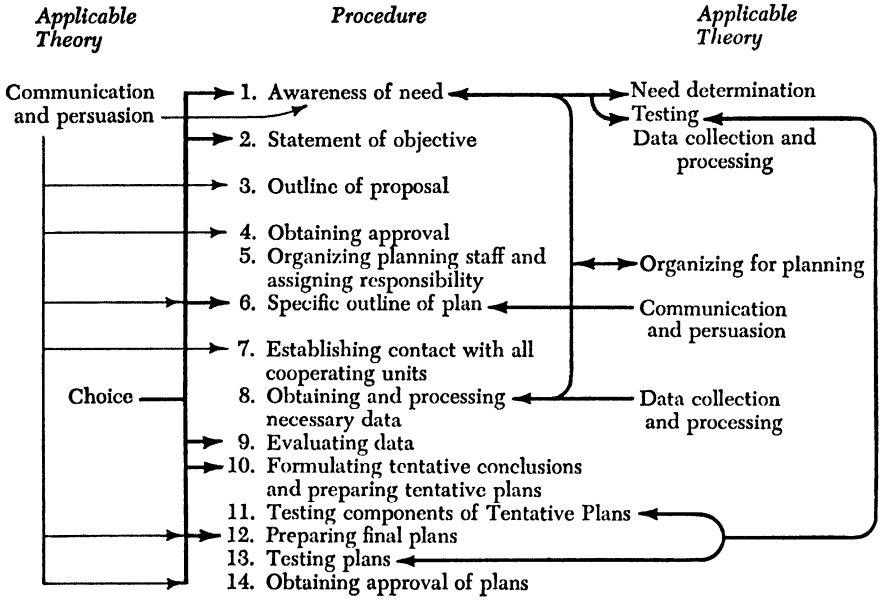
our discussion of each dimension we have shown that each is a function of certain activities and conditions within and outside of the enterprise. We then indicated the influence of each dimension upon the planning process. Table 2-1 shows the relationship of each dimension to various parts of the planning procedure. Now we can integrate various dimensions and show their combined influence on the planning process. Note that there are a great variety of possible combinations. For example, the greater the complexity and significance of plans, the greater the likelihood that the planner could gain significant benefit from following the procedures indicated in Table 2-1.

Thus far we have stated the relationship between dimensions and the planning process in rather general terms. We have not attempted to explain in detail the various reasons why different dimensions have a certain influence on the planning process or the specific nature of the influence. For example, we indicate that a planner confronted with a fairly complex and confidential planning project would likely wish to make formal contact with cooperating units. We did not explain that the reasons for the formal contact may be quite different between these dimensions. For the complexity dimension one major reason could be the felt need to make the project understandable to the participating units so that effective cooperation could be had. The dimension of confidential nature may call for formal contact to insure that the right people are informed and that proper security measures are undertaken to keep the plan confidential. The point is that although two or more dimensions may suggest a certain relationship to the planning process, the reasons for these relationships may be significantly different, and, thus, the specific way in which the relationship is handled may vary among dimensions. Thus subject area is given detailed treatment in other chapters.

A second important point that we have not covered is the theory behind the various steps in the planning process. We view the following theories and functions as important components of a general theory of planning:

Theory of Need Determination
Theory of Choice
Theory of Data Collection and Processing
Theory of Testing
Theory of Organizing for Planning
The Role of Communication Theory in Planning
The Role of Persuasion Theory in Planning

In the following chapters we examine each theory and its relationship to the planning process. In doing this, we first develop the pure theory and then relate it to plans composed of varying dimensions. We view this general relationship as follows:


Applicable Theory
Procedure
Applicable Theory
Communication and persuasion
Choice
1. Awareness of need
2. Statement of objective
3. Outline of proposal
4. Obtaining approval
5. Organizing planning staff and assigning responsibility
6. Specific outline of plan
7. Establishing contact with all cooperating units
8. Obtaining and processing necessary data
9. Evaluating data
10. Formulating tentative conclusions and preparing tentative plans
11. Testing components of Tentative Plans
12. Preparing final plans
13. Testing plans
14. Obtaining approval of plans
Need determination
Testing
Data collection and processing
Organizing for planning
Communication and persuasion
Data collection and processing

Part II

BUILDING THE SUPER-STRUCTURE

for a theory of planning

Part II deals with the central core of the planning process, treating first the problem of how a planner might discover the desirability or necessity of a plan: the "Theory of Need Determination." After evaluating the various means available for helping the alert planner locate a possible problem or opportunity, we proceed to examine ways in which these ideas, notions, or observed events might be tested to determine their significance. This is one of the most vital chapters in the book and an integral part of the over-all planning theory. Most present attempts at theory building begin with the assumption that a problem exists. We feel that any attempt at preparing a suitable plan is intimately connected with the forces which caused the plan to be devised.

Chapter 4, "Theory of Choice," covers the following topics in logical order: establishment of objectives; determination of alternatives; determination of significant variables; assignment of values to each variable; the assignment of probability values to variables, and the final decision on a plan. Two items in this chapter warrant further comment. In evaluating the process whereby all possible or conceivable alternatives are reduced to all possible or useful alternatives, we found it necessary to develop a scheme of our own to explain how this process might be carried out in a logical fashion. Throughout this chapter we examine and attempt to explain this phase of the planning process from the point-of-view of the planner rather than from an impersonal viewpoint.

The placement of Chapter 5, "Theory of Data Collection and Processing," might seem out of order, coming as it does after the previous chapter, "Theory of Choice." We have delayed the presentation of this topic because we did not wish to interrupt the natural transition between theory of need determination and theory of choice. In this chapter we establish 13 characteristics or dimensions of data, data collection, and data processing. We have found it useful to deal with this combination as a unit. The influence of each characteristic is first explained and related to the planning process. After all characteristics are treated separately, logical combinations of these characteristics are then related to the planning process.

Chapter 6 deals with the theory of testing as it relates to planning. In this chapter we relate testing to various phases of the planning process. Particular emphasis is given to the testing of a completed plan by the planner as well as the executive responsible for giving approval to the completed plan.

3

THEORY OF NEED DETERMINATION

BASIC TO THE PREPARATION OF any plan is the recognition that a need exists for at least considering the feasibility of undertaking a study. This initial step, recognizing the need for a plan, is of prime importance because, unless it is handled properly, a company is always performing at some level below top efficiency. The company may be delayed in introducing a vital plan and thus lose a strategic advantage, or it may fail altogether to develop a plan which could result in increased income or reduction in cost.

Most executives have a very wide range of possible sources of information from which they may receive assistance. These sources are extremely diversified in origin and nature. The number of sources and frequency of contact between the source of information and the executive is often of such magnitude that the executive may well feel that he spends a disproportionate amount of time each day evaluating the pros and cons of suggestions, proposals and ideas. It has been suggested in previous

chapters that planning is one of the most important parts of the executive's job, and that perhaps the efficient executive who feels frustrated because of the incessant pressure upon him to consider possible plans is doing exactly what a good executive should be doing. The reason why this is true is that a number of the sources of information which he wishes to evaluate are directly controllable by him. If he wishes to ignore some of these sources, and as a result possibly find himself faced with a major crisis in the future, he may do so.

This chapter treats three major concepts. First, consideration is given to an analysis of the more important sources of ideas and the characteristics of each source. Secondly, the concept of standards is developed from the point of view of providing a guide to the planner who evaluates ideas or suggestions. Note that these two concepts (source of ideas and standards) are developed jointly because of the importance of their relationship. Lastly, attention is given to identifying the cause behind the problem. This is done so that a fairly precise statement can be made of the objective of the plan to be prepared to correct the problem at hand or to take advantage of the opportunity presented.

An overall picture of some of the items a planner might find useful as he attempts to solve his problem of determining need and setting specific objectives is given below.

	Source
IDEAS	Formal Control
	Systematic Audit
	Unit Demonstrates Need
	Employee Suggestions
	Outside Initiative
	Perpetual Study
	Management Observation and Contemplation
	Management Suggestions and Directives
	Board of Directors Suggestions and Directives
	Measures
TESTED AGAINST STANDARDS	Sales Forecast
	Operating Budget
	Production Schedule
	Quality Specifications
	Work Standards
	Determining Causes
ISOLATING CAUSES	Market Research
	Industrial Experimentation
	Analysis of Variance
	Simulation

	Statement of Objectives
ESTABLISHING OBJECTIVE OF PLAN	Select Vendor
	Acquire New Machine
	Redesign Product
	Select Plant Location
	Select New Distributor
	Maximize Contribution to Profit
	Maximize Cost

SOURCES OF IDEAS

The first topic considered is sources of ideas. No official priority is assigned each source since its relative importance is determined by factors other than its intrinsic nature.

Formal control

A large variety of activities which fall under the jurisdiction of every executive lend themselves to systematic controls. The basic requirement for successful control consists of a set of standards for each significant item which reflects anticipated and desired performance and an acceptable range of variation from ideal performance. When variations are expected and have, as a matter of record, occurred, a decision rule may be incorporated into the control system so that action is semi-automatic. Quite frequently this is not possible or logical. Under these conditions—and often when predetermined decision rules are used—the executive must interpret the significance of the variation and the course of action that ought to be taken. It is particularly within this realm that formal controls become a vital source of information which may suggest the need for further planning activity. This discussion is not intended to be an analysis of the techniques of control but only a review of the role of control in need determination.

A few examples should help to explain the central point of this discussion. The program designed by the credit and collection unit to reduce the loss resulting from non or part payment of debts by customers may include a thorough check of credit references and a follow-through, when necessary, with collection letters. The head of the credit or finance department may find it advisable to set a goal he hopes to obtain and maintain. The goal might be expressed in terms of per cent of total sales not collected, length of collection period, or total loss from bad debts. He will probably determine what a reasonable rate of loss would be and have reports prepared which indicate actual results. Careful scrutiny of these reports, particularly when serious variations occur, will suggest areas where further planning might be needed.

The establishment of sales quotas by a marketing executive and the careful study of reports from salesmen will enable him to gauge the success of his campaign and the possible need for a change in the program. The production manager will likely establish and use standards in the vital areas of units of production, scrappage, downtime, quality, tardiness and absenteeism.

In all of the above examples, the responsible executive has been able to keep himself informed of actual performance versus expected performance. When the variation is within acceptable limits, no further action is required. When it is beyond or close to the acceptable limit, a predetermined plan may be followed, or an interpretation has to be made of the significance of the unexpected variation. These two approaches may be thought of separately but are often used jointly.

When a semi-automatic or fully automatic machine begins to produce scrap or approach the limit, the machine may be shut down and parts replaced or repaired. This is fairly automatic when the machine is at fault. On occasions the foreman or supervisor may notice that poor work habits or inferior materials are causing the high scrappage rate. In this case, an interpretation is made of the cause of the problem and, if necessary, a plan is prepared to correct the problem.

When the credit manager receives his weekly or monthly report, he will certainly seek to determine the cause of the large number of delinquent accounts and the increase in the pay period for those who eventually satisfy their obligation. The marketing manager who finds sales dropping perceptively should seek an explanation for this trend. Rather than develop further at this time the process whereby an executive evaluates the significance of the information made available to him, we offer a detailed discussion in Chapter 5, "Theory of Data Collection and Processing."

Controls are of great value to the planner because they enable him to gauge the success of all existing plans. This advantage may generate an important disadvantage if deliberate care is not exercised by the planner. This danger is the tendency on the part of the executive to be overly preoccupied with the accomplishment of an existing plan. When results tend to conform to expectation, the executive may become complacent and rather self-satisfied, content to live within the framework of his existing successful plans. It may become extremely difficult to force one's self to even consider variations of a plan which is successful, especially when there are guides to prove its success, perhaps even beyond expectations.

The best way for an executive to fight this tendency toward complacency is to think of each plan as an instrument in a dynamic environment and to consider that a plan is the "best" plan to the extent it reflects the direction of change occurring in one or more or all environ-

mental components. A second approach would be for the executive to dedicate himself to supplant each existing plan with a superior plan even when he believes his present plan to be the best available.

Systematic audit

Formal controls were described in terms of rather frequent, and occasionally continous, checks on a variety of separate items. Systematic audits have some of the same characteristics, but they tend to be less frequent and often embrace the entire company in a general, comprehensive study. In a sense, an audit can be thought of as a reappraisal of the success of the individual units and the company as a whole.

Although an executive may be very much concerned about day-to-day and weekly variations from standard, he is also greatly concerned with the total results for the year. There may be few or many items which cannot be easily changed even when there is fairly general knowledge that expectations are not being realized. There are other items which must be considered over fairly long periods of time, rather than days or weeks, before true measure can be made. A new advertising program, a revolutionary product style or design, a new installation or a new functional department may all fall within this category. Or consider the example of a marketing executive. As a result of the end of the year audit, the marketing manager may find that 25 per cent of his accounts provide 80 per cent of the sales; that 40 per cent of his salesmen provide 70 per cent of the sales; that 10 per cent of sales represent new accounts, and that charge sales have increased from 30 per cent of total sales to 50 per cent of all sales. With this information available, especially if it is at variance with expected and previous results, the marketing manager will probably wish to revise or at least reconsider some of his plans for the next year.

Even when day-to-day controls are accurate and useful in suggesting the need for revising plans or preparing new plans, the annual audit is useful for providing management with a view of the total success of the enterprise. Frequently, as has been noted above, an insight is given into areas which are not uncovered by any other check. This is particularly true in areas which cover two or more departments and where each executive is primarily concerned with his own performance. The audit should provide an insight into the over-all integrated performance of the company as well as for any one department.

Standards are used in the same fashion in audits as in formal controls in that desired levels of performance are established as standards and actual performance is measured against these standards. The profit-and-loss statement and balance sheet, among many other criteria, are com-

monly used to measure the overall performance of the firm. Such important items as the return on investment, average level of inventory, and breakdown of major cost items as a per cent of sales or profit can be obtained from these statements. When several previous years are included on a comparative statement, a useful trend can be determined. In either case, the company usually has an estimate of desired performance to be compared with the actual results. When the results are compared with expectations, (and it should be emphasized that the picture may be favorable as well as unfavorable) general conclusions will be formulated as to the cause of the discrepancy. When major differences exist between actual and expected, it may be decided that new or revised plans should be formulated.

A systematic audit can prove particularly valuable when it is interpreted and explained to various units with the organization with the expectation that each in turn will comment upon the conclusions drawn. This process, which frequently takes the form of an evaluation committee, has the advantage of giving each key executive in the company the opportunity to express his view, in specific and concrete terms, regarding the operation of all departments. At the same time, it provides for a free exchange between executives on all matters of importance.

An advantage of the audit is that it forces various levels of management to think in terms of output as well as input on an integrated basis. It demands that a sound explanation, and frequently a recommended course of action, be presented to top management when serious discrepancies exist. For the greatest possible benefits to be realized, each unit and subunit should prepare an estimate of expected input and output. It should then keep adequate records to be used to determine actual input and output. The budget is one of the most useful instruments for forcing lower units to prepare and maintain these estimates and records. It should be noted again that the audit has general applicability over every department as well as the enterprise as a whole. Thus, the chief finance officer, the head of the production department and the marketing chief each has an over-all view of his total departmental operation. The audit can be placed at a higher level in which all departments are integrated or at a lower stage in which subunits of each department have independent and separate audits.

General evaluation of formal controls and systematic audit

Both approaches share in common the need for accurate standards and records. They both have the advantage of measuring actual performance so that the results stated are a matter of record rather than opinion, hunch or guess. Likewise, the determination of variance is based

on agreed-upon and recognized standards. Once the system is in operation, the flow of information should be relatively routine. The major concern in using either of these methods is in the establishment of standards and records. This does not imply that the actual measurement of performance is not important and vital. It does suggest that once the measurement of performance by use of the standards becomes a recognized part of the job content, it will be performed as automatically as any other component of the job.

The greater the use made of controls and systematic audits, the greater the likelihood that:

all important areas within the company will be covered by plans

plans will be prepared in time to avoid unnecessary loss due to excessive tardiness in formulating them

automatic decision rules or substitute plans will be prepared in advance to correct or replace plans that prove inadequate

the planning process initiated to correct the discrepancy (particularly when the adjustment needed is not great) will follow closely the original process.

Unit demonstrates need

Probably the greatest advantage to the planner of the use of controls to determine need is the opportunity it provides him to engage in preventive rather than corrective planning. The greatest disadvantage of having need determined by a "unit" demonstrating the need is that planning tends to be more corrective than preventive. The concept of "unit" is that of a person or thing, such as a machine or building, which takes the initiative to act in such a way that a plan must be prepared if orderly operations are to continue.

When a supervisor approaches his superior and submits his resignation, when union workers unexpectedly walk off the job, when a fire destroys a major portion of the plant, when an executive is killed in a plane crash, when a major customer decides to make his own parts rather than purchase them, or when a leading supplier changes location of his facilities, it becomes startlingly apparent that a plan is required. An alert top executive may have anticipated that one or all of these things would happen; perhaps he has already prepared tentative plans for just such an eventuality. Frequently this is not the case. Attention here is focused on those occurrences which an executive did not expect. To be sure, every executive knows that an important subordinate may unexpectedly leave, die, or be killed. The possibility that a major supplier or distributor may sever his relationship with the company is likewise a reasonable possibility. The key point is, however, that the particular executive or distributor is not known nor is the exact time of this event known. Any advanced planning, therefore, must be fairly general and tentative.

When one or more of these areas is particularly critical to the welfare of the firm, it is even more likely that substitute arrangements, if only stop gap, have been planned. For example, all key executives may have understudies, all subordinate managers are trained to take over when needed, the number of suppliers or distributors used and the amount bought from or sold to any one supplier or distributor may be determined by reference to the importance of continued service to the firm. Finally, much of the loss that could result from unexpected events can be reduced by adequate insurance coverage.

To the extent that a planner has not anticipated an act and thus has not taken certain precautionary measures in advance, there is strong likelihood that:

an emergency plan will be prepared

all important facts will not be considered in formulating the plan

the company will suffer some significant loss during the planning period

some and perhaps all of the steps in the planning process will follow a unique pattern.

Employee suggestions

For many years it has been recognized that every employee within an organization is a potential source of valuable information to the company. Regardless of his functional area of interest and his level within the organization, he has a storehouse of knowledge regarding the company and its activities. Most managers know that unless specific attention is given to the problem of encouraging employee suggestions, only a small per cent of employees will be anxious to communicate their ideas to management. Not infrequently when there is employee interest there may be other barriers which prevent the fullest use of the information potentially available.

The encouragement of free employee expression is particularly valuable as a source of information because employees have a frame of reference and work environment completely different from that of most top level executives. Their daily routine gives them a familiarity with specific problems not always shared by others, and their close contact with operating personnel, both departmentally and interdepartmentally, provides them with a feed back regarding a new policy and procedure that managers may never get through formal channels. As would be expected, many of the suggestion systems established in the past have concentrated on improvements in work methods, procedures and layout within the immediate employee environment. In more recent years employees have been encouraged to submit ideas covering events, things and people in other departments and at higher levels. Such areas as advertising policy, com-

pensation methods, public relations and product styling may be included in employee comments.

Because of the increasing use of formal suggestion systems, many observers restrict the concept of employee suggestions to this narrow emphasis. This is not the interpretation to be used in this chapter. If an executive waits for the employee to take the initiative, even when an elaborate suggestion scheme is in operation, he will certainly miss using the fullest potential of the employee as a source of information. The alternative of relying solely upon the employee to take the initiative is to have members of management solicit the opinion of employees. This approach can be used effectively for getting employee ideas about long-range, broad-gauge programs as well as more routine, short-term plans and procedures.

One of the most effective methods used is to call employees into conference and present them with a problem situation. Note that these are not hypothetical problems, nor is the incentive to include employees in the planning process primarily a desire to educate. The sole purpose is to have employees give views and insight unavailable to the planner from any other source. These views and insights, incidentally, may not be forthcoming if the initiative for action is left to the employees.

Someone might well say, at this point, that this approach does not provide members of management with information regarding problem areas which they might overlook since the executive took the initiative to call the meeting after he or a higher level executive became aware of the problem. This is basically true, but there are two modifications of this statement which make this approach a valid source of ideas for new plans. First, the ideas received in response to a given problem may contain statements which will frequently point out other problem areas which were not known or anticipated by the responsible executive. In fact, as a result of group discussion, one or more problem areas may be brought up which are given priority over the original problem placed before the group. For example, a meeting may be called to discuss the scheduling of the internal flow of traffic or materials-handling equipment. Some of the topics which may be discussed, although not originally placed on the agenda because it was not apparent that these were major considerations, might include the organization of the internal traffic department, the compensation of operators of materials-handling equipment, the size of the load handled, the size, shape and construction material of the pallets and tote boxes, the design of the transport equipment and the physical layout of the storage unit. As a result of this discussion, one or more or all of these items might be included in the plan which now takes on greater scope and significance. If the responsible executive had not con-

sulted with his subordinates but had prepared the plan himself, much of the information might not have been considered.

Second, and this is a slight variation of the initial approach described, an executive may call periodic meetings without a prepared agenda to guide the proceedings. Rather, each person in attendance may be asked to report on items of interest to the group and the company. Assume a central wage and salary administration department with staff authority. One or two members responsible for preparing, not approving, job descriptions and acting as secretary for a job evaluation committee may report at a general departmental meeting that, increasingly, line executives are asking them to rate various jobs. These employees may express the fear that their position as staff specialists is being jeopardized because line executives are demanding that they, the analysts, do the actual rating of jobs. The head of the wage and salary department may decide that this could lead to serious problems because line executives would be more inclined to shirk their responsibility by claiming that the staff department representative was responsible for the rating. The need for investigating this apparent problem was generated by the open discussion at the meeting called by the department head.

Outside initiative

There is a strong similarity between employee suggestions and outside initiative or non-employee suggestions. In each case, the individual can take the initiative or the executive can act first. In addition, the executive has to appraise the reasonableness and value of the ideas brought before him and decide whether or not further action should be taken.

Probably the major difference of importance between the two groups is that the outside group represents such a diversified interest that the ideas presented will cover a broader range than those submitted by employees. When considering the company as a unit, the number of distinct sources is quite large. One immediately thinks of such units as stockholders, government officials, distributors, suppliers, consumers, and the general public. This list could be expanded to include, among others, former employees, union officials, educators, competitors, newspapermen and clergymen. The total number is not significant except as it lends to the complication of the process. Usually, it is found that different sources have a tendency over time to concentrate upon a given functional unit within the company and at a distinct level within the hierarchy of management. The important point for the executive is to recognize those sources which are most likely to be of value and to provide ease of communication between him and the sources. The marketing department may find that distributors, consumers and clergymen are their prime contacts

with the outside. Distributors may keep the marketing executive informed of merchandising policies of competitors, consumers may discuss the quality of the product, and clergymen may be concerned with the moral implications of the product or advertising scheme.

The contribution of the clergy can serve as a more detailed example. Some of the possible areas of conflict that could develop in the advertising of liquor or beer include the use of women in the advertisement, the age of the persons included, the occasion when the beverage is consumed, the copy material and the media selected for placement of advertisements. If the advertising manager receives a few scattered complaints, he might see fit to ignore them. When a clergyman acts in behalf of an association that has passed a resolution condemning certain actions and has made elaborate plans to back its decision if corrective action is not taken by the offenders, the advertising manager may decide to study the recommendations submitted.

After an executive has had frequent experience with important and influential groups, he may decide to consult with their representatives in advance of preparing or instituting major programs. These contacts will not only provide the executive with helpful ideas relating to the project under consideration, but frequently it will also include reference to areas far beyond the scope of the projects.

General evaluation of employee and non-employee suggestions

The emphasis in this section has been upon the obtaining of ideas by executives from sources other than the normal flow of information within a company. Two of the major barriers to the fullest exploitation of all useful sources are the lack of incentive to disclose one's views and the many obstacles that exist to effective interpersonnel communication.

Incentives. There are at least three ways in which employees can be encouraged to pass on valuable ideas. Most traditional suggestion systems provide for a money reward to be given an employee who submits an accepted cost reduction or revenue increasing scheme. The amount of money given is related to the value received by the company. A second approach is to reward an employee by increasing his base pay. This may be done by including such factors as initiative, ingenuity and judgment in the performance rating form. The third method, and in a sense it is an extension of the second, is to reward an employee by promoting him to a higher position. Of course, these three techniques are effective to the extent that employees are aware of them and feel personally inclined to think creatively and to pass on their views to their superiors.

Providing incentives for non-employees is a more difficult matter, particularly when it is desired to have the initiative taken by the non-em-

ployees rather than a member of the management team. A major part of the incentive, of course, may come from outside the enterprise. The distributor or consumer may wish redress of a grievance, deriving his satisfaction by having the company correct the error which caused the initial contact between parties. Some units, such as government, the general public, educators or clergymen, may receive psychic income from the feeling that they are protecting the public interest. In many of these cases, unfortunately the initial communication between the parties was caused by a desire to have the company correct some of its present practices.

Another group of outsiders—suppliers and distributors—may be motivated because of their close association with the company and their recognition of the mutuality of interest existing between themselves and the company. The supplier recognizes that he may lose a market for his products while the distributor may feel he is at a competitive disadvantage with other distributors. It is rather surprising that more companies do not provide direct incentives for outsiders that are comparable to those used in employee suggestion systems. The granting of money awards for supplying useful ideas about product styling, packaging, or services should encourage non-employees as well as employees to offer worthwhile views.

Barriers to communication

Since Chapter 10 is devoted to the problem of communication as it relates to the planning process, only a few observations will be made here. The initial problem centers around the individual with the idea and the difficulty he may have in translating his views into a meaningful proposal. The second problem concerns itself with the technical difficulty of determining the logical recipient of one's proposal and the best way to get the information to the proper party. The third problem is that of communication between the recipient of the proposal, once he has studied it, and the originator of the idea.

Although each barrier has qualities peculiar to itself, there are two common problems. One is the technical language used, and the other is the frame of reference used by all parties, particularly in regard to objectives and goals, but also relating to means of achieving these goals.

The greater the number of ideas indicating the need for planning which come from employees and non-employees, either through their own initiative or the initiative of management,

the greater the possibility that problem areas will be considered before the situation becomes excessively difficult

the greater the need to screen suggestions and proposals

the greater the likelihood that employees will be brought into subsequent steps in the planning process

the less likely that time pressures will be an important factor in the overall planning process

the greater the likelihood that plans will be revised or new plans formulated in areas which management might not otherwise consider.

To the extent that these sources of ideas are to be encouraged, the company should establish a positive reward system—both financial and non-financial—, educate its employees in creative thinking, and establish an effective communication system.

Perpetual study

This concept is to be used in a fairly narrow sense to include those ideas which result from the findings of specialists who are assigned the primary task of making present plans obsolete or gauging basic trends in the social, economic or political environment in which the company operates. It has already been explained that many others inside and outside the company may feel motivated to supply executives with their personal views concerning some of these trends. The emphasis in this section is upon those who are qualified through training and experience to engage in the pursuit of this knowledge and who are specifically assigned the task within the company.

The product research group, the economist and motivational researcher are examples of this group. The research group may be interested in developing new raw materials, products, packages or equipment. Any discovery or invention which would result in significant competitive advantages to the company, cheaper cost or superior product, for example, would certainly suggest the need for a reconsideration of existing plans.

The economist, psychologist and motivational researcher are more interested in the trends in human behavior as they affect work habits and buying habits. They search behind the premises used by the executives in planning and hope to note changes in trends before these changes become apparent to the layman and competitors. The significance of an increase in the average size of families, the per cent of wives working full time, the shift in the pattern of savings, the breakdown of segregation, and the outlook for taxes are items of concern to the specialist.

When specialists are used extensively and properly, they provide an excellent source of new ideas. There are a number of problems associated with the use of specialists which are discussed in a separate chapter. The important considerations here are that an adequate channel of communication exists between the specialists and operating executives and that the executives are fully informed of the various services specialists may provide.

The greater the use of specialists and research units within the organization,

the greater the problem of communication between participants in the planning process

the greater the likelihood that the company will be kept informed of significant developments

the greater the dependence on specialists for the implementation and control of plans

the less likely that time pressures will be an important factor in the over-all planning process.

Management observation and contemplation

It is quite obvious that formal controls and systematic audits are frequently restricted to those areas where standards can be established and where data can be collected as a matter of record. It is also apparent that information furnished from outsiders as well as employees is greatly conditioned by the personal views of the individual and his restricted perspective. All of these sources of information are of interest and importance to the organization. But there is one source which cannot be duplicated since it is peculiar to the individual. This is the executive himself. To be sure, he uses one or more or all of the above sources to assist him in planning. But none of these has the sensitivity, foresight, and perspective of the executive himself. In a sense, it can be said that once the executive has exploited all other sources of new ideas or measures of trends, he must look within himself for ideas not available elsewhere.

There is no substitute for the executive who has vision, sensitivity, ingenuity and initiative. Even where others possess these qualities to a greater extent than he, they lack the formal position and authority, and the full knowledge of the executive. The experiences and contacts which are part of the day-to-day routine of an executive put him in a unique position to observe, to study, and to judge reactions and trends. His personal association with other company executives as well as outside business associates on both an informal and formal basis allow him to test budding hypotheses of his own. The availability of confidential company information allows him an insight into problem areas and general management thinking not available to others. Furthermore, he is likely to be the person most concerned with planning, since this is his major responsibility.

Recognizing that the executive is the chief planner within his unit, the problem becomes one of determining how he might generate new ideas which would lead to better plans. One logical starting point would be to divest himself of as much day-to-day routine work as possible so that he has available time for observation and for contemplation. He might next

be certain that the objectives and goals as well as procedures of the department are sound and understood by all members of his unit. He might then establish a system of priority in his own mind as to the relative importance of various functions under his jurisdiction. With these steps taken, he is prepared to open up the various channels of communication which may feed him new ideas and programs. This completes the preparation or getting-ready stage; for if done properly, he should have available to him many of the newer ideas. He can then proceed from an evaluation of these ideas presented by others to the generation of ideas of his own.

The greater the use made of executive observation and contemplation as a source of ideas, the greater the likelihood that:

plans will be formulated to cover most of the important areas within the company requiring plans

planning will be preventive rather than corrective in design

the planning process will be fairly unique for any given plan

the need for special care at crucial stages of the planning process will be greater in formulating precise statement of objective of the plan, preparing a broad outline of the proposal, organizing the planning staff, establishing contact with cooperating units, testing components and the completed plan, and obtaining approval of the plan.

Management suggestions and directions

The emphasis here is upon all managers other than the manager who has primary responsibility for the plan affected by the information provided. This may include the president as well as first and second level foremen and supervisors. A useful way of classifying the various "managers" is by levels within the organization with the focal point being the manager who will use the information provided. Usually there will be managers at a higher, a lower, and an equal level who may be of considerable assistance to the alert planner.

Managers at a higher level. A subordinate manager may receive useful planning information from a superior in the form of a directive or general suggestion or recommendation. When a directive is issued to a subordinate, he is instructed to comply with the order. There are many reasons why a directive may be given. Some plans, particularly those which are highly significant and comprehensive, naturally originate at a fairly high level within the organization, Under these conditions, the initiative is taken by the higher level manager as a matter of course. On the other hand, the initiative may be taken by a superior manager because the subordinate has failed to recognize an apparent need or he has delayed taking the required action for the preparation of a needed plan. In this case the need for a plan was made known by the superior because of the failure of the subordinate to perform his planning duties. Note that it

would be dangerous at this point to assume negligence, indifference or inability on the part of the subordinate. It is quite possible that his previous efforts (particularly in regard to initiating new plans) have been repeatedly thwarted by his superior. Perhaps he has learned through experience that his superior prefers to inform his subordinate of the need for a plan even though it may make it difficult or delay the planning process. Of course, there are many cases when action by a superior is required because of the failure of a subordinate to perform his planning function. The responsibility of the subordinate in all cases (initiative taking by superior because of the nature of the plan, because of his philosophy of management, or because of weakness of the subordinate) is to keep his superiors informed of events and activities within his unit so that his superior can determine more effectively and more quickly the need for formulating a new plan.

The second way in which a subordinate manager may become aware of a possible need is by having a superior suggest general areas where one or more plans might be developed. We are viewing this section from the vantage point of the planner who, in our current frame of reference, is the subordinate. Preferably the subordinate would provide an environment conducive to the free exchange of information and ideas. An environment in which his superior would feel free to visit with him and to suggest possible new directions without fear of resentment. The superior has frequently come up through the ranks or at least has experienced much of the type of work currently assigned the subordinate so that he usually has a number of ideas that could be of value to a subordinate. In addition, he usually associates both professionally and socially with one or more executives performing similar work in other companies and thus may learn of new developments and trends before they become apparent to his subordinates.

The superior frequently can be a useful sounding board for the subordinate who has rather radical or unique ideas regarding new plans. In a very real sense the superior can provide new ideas, he can help in the testing of ideas of subordinates, and he can advise as to the likely impact of these ideas upon the planning process.

Managers at the same level. As one moves up the organization ladder in a company, one quickly discovers that the number of managers at the same level is likely to be reduced. One also finds that the job content of managers at a given level changes from fairly related tasks to greatly unrelated tasks. Another way of saying this is that there are usually more foremen than general foremen and more department heads than division heads. The several foremen in a production department have fairly related, and at times integrated, tasks while the department heads may have such divergent functions to manage as production, marketing and finance.

As in the previous case of the superior-subordinate relationship, the focal point is the manager responsible for the plan that will be affected by the information and ideas provided by other managers at the same general level within the organization. The two big questions are the same. What can he do to maximize the flow of useful information? Why should he concern himself with this source of information?

Frequently, the major barrier to the free exchange of information between equals is the lack of trust and respect on the part of one or both parties. A manager soon learns to keep his ideas and opinions to himself if the expression of his views results only in rebuff by those with whom he communicates. A manager desirous of being kept informed about activities relevant to the success of his unit must by word or action indicate his position.

A fellow manager can frequently provide ideas and suggestions that may not be forthcoming from any other source. Or, if forthcoming, the delay would be sufficient to create a serious problem. Many problems related to personnel could fall under this category. Often the manager concerned is the last person to know that a key subordinate is displeased with his work assignment or is seriously considering other opportunities. Some departments have a natural basis for cooperation. An example would be a production department which is interested in getting a feedback from sales concerning the customer's reaction to product quality. Or, a finance section responsible for a new credit or discount policy may be interested in the salesman's report of customer reaction. It might be emphasized that even in cases such as those referred to above, where the feedback from sales is expected as a matter of policy, there is need for cultivating a cooperative relationship between parties.

Managers at a subordinate level. This topic is not to be confused with employee suggestions although many of the points made in discussing employee suggestions would apply equally well here. The subordinate being considered here is the manager who reports directly to the superior. Of course, each manager usually has more than one subordinate manager under his jurisdiction. This is significant because each subordinate may be in a position to supply ideas and information concerning his area of responsibility and areas of responsibility of fellow managers as well as the unit as a whole. Frequently the superior is in a favorable position because of the closeness of the operational relationship between superior and subordinate. Nonetheless, the superior must take special care to provide an environment most conducive to the generation of ideas by subordinates and the free, easy flow of information between each party.

In summary, each manager is surrounded by other managers who may help notify him of the possible need for preparing a plan. The managers above him, below him and at the same level all are possible sources of

vital information. Each manager must provide an environment most conducive to the free exchange of ideas between himself and various other managers.

The greater the use made of *suggestions* from managers, the greater the likelihood that:

all significant areas will be covered by plans

planning will be preventive rather than corrective

time will not be a critical factor in the planning process

it will be important for the planner for his personal guidance to take special care to formulate a precise statement of the objective of the plan.

The greater the use made of *directives* from superior managers as a matter of company policy, the greater the likelihood that the planning process will follow a rather formal and routine procedure, and that the manager responsible for preparation of the plan will increasingly depend upon his superiors for initial guidance and direction.

Board of directors

The basic characteristics of the board of directors and the nature of the responsibility and authority assigned it put the board in a unique position as a source of ideas for plans. Usually a rather large number of the members are from outside the company, and they frequently bring a fairly objective and critical point of view to bear on company problems and opportunities. Their divergent background in training, education and experience often allows for a new and fresh point of view not available from inside members. The mere fact that the board is assigned the major responsibility for maintaining the economic welfare of the company puts it in a position where it has access to information not always available to most levels of management. For example, the results of most significant and comprehensive plans are usually reported to the board. Thus they are in a position to evaluate progress and recommend or direct change in existing plans. Likewise, most significant plans are submitted to the board for approval. This provides an opportunity for the members to recommend a direct change in the proposed plan and perhaps to offer substitute plans deemed to be of greater importance to the company.

Perhaps it is well to emphasize again that we are looking at the concept of awareness of need from the point of view of the person or unit primarily responsible for the plan affected by the idea and information flow from the board of directors. Thus, the pertinent questions might be: What can the planner do to obtain maximum benefit from the board of directors? Or, what can he do to avail himself of this important source of information and ideas? Of course, the organization level of the manager and his presence on, or absence from, the board as an inside member,

among other factors, will greatly influence the particular way in which he approaches the problem. Regardless of the above considerations, the degree of assistance a manager is likely to receive will be conditioned by many factors personally related to the individual. Among these are the accuracy, completeness, timeliness, significance and persuasiveness of the proposals he submits to the board or senior officers within the company. The degree of skill he uses in anticipating company problems and forming provocative questions designed to elicit information from directors and the accuracy, timeliness and completeness of the feedback information he gives the board are also important. Beyond this, the personal qualities of being able to receive ideas and recommendations (particularly, when they are in opposition to or in conflict with views held by the planner) graciously and to reply to questions intelligently and unemotionally will assist the planner in establishing an environment most conducive to the free exchange of information with members of the board.

The greater the use made of *suggestions* from members of the board of directors or the board as a unit, the greater the likelihood that:

a fairly significant area of company operations will be covered by the plan

it will be important for the planner to take special care to formulate a precise statement of the objective of the plan

it will be easier to gain cooperation at various stages of the planning process, such as participation on the planning staff, obtaining necessary data, and testing components and the final plan

special care will be taken in preparing and testing final plans.

The greater the use made of *directives* from the board of directors, as a matter of company policy, the greater the likelihood that: the planning process will follow a rather formal and routine procedure; and the manager responsible for preparation of the plan will increasingly depend upon his superiors for initial guidance and direction.

The nine separate means available to the executive to assist him in becoming aware that a plan needs revision or a new plan should be prepared have been combined into the following seven distinct groups:

Formal controls and systematic audit
Employee suggestions and outside initiative
Unit demonstrations of need
Perpetual study
Managerial observation and contemplation
Management suggestions or directives
Board of directors suggestions or directives

Two combinations were made because of the similarity of the combined units. A summarized way of viewing these means is to show how each can

be encouraged to participate and to list some of the possible problems associated with each source.

Source	*To Maximize Contribution from Each Source*	*Possible Difficulties or Shortcomings of Each Source*
Formal controls	Accurate standards Adequate records Decision rules for automatic correction	Seldom generates new ideas
Systematic audit	Accurate standards Adequate records Presentation of trends	After the fact
Unit demonstrates need	Encourage early reporting Use flexible plans Use decision rules for automatic correction	After the fact
Employee suggestions	Incentive system —cash payment —pay raise —promotion Training Selection	Expensive in time and effort Rejection may cause low morale
Outside initiative	Incentive Ease of communication Executive takes the initiative	Reliability of information Time and effort Often negative in nature
Perpetual study	Selection Training Incentive Work environment Cooperation	Costly Cooperation and communication between line and specialists
Management observation and contemplation	Selection Training Delegation of authority	Too much may lower the efficiency of department Often interested in means rather than ends
Management suggestions	Provide cooperative environment Reciprocal suggestions	Too much may cause excessive dependence Too much may result in antagonism between parties
Board of directors' suggestions	Provide cooperative environment Reciprocal suggestions	Too much may cause excessive dependence Too much may result in antagonism between parties

The way in which an executive approaches the use of any one of these sources greatly influences the success of the relationship between the interested parties. An executive will usually find that he must take the initiative in developing the desired environment for the maximum use of all sources. An executive is most likely to succeed if he demonstrates a genuine interest in each source; is fully aware of the nature of the advice that each source might render; and gives adequate consideration to each

proposal and justification for his decision to use or not to use the recommendation.

Note that even when formal controls and systematic audits are used, the same observations made above hold true since the employees who maintain records and measure performance will respond favorably or unfavorably depending on the actions of their superior.

To the extent an executive uses the various means of becoming aware of new planning demands, he will find a greater part of his daily work concerned with interpersonal communication; he will find the total initial planning time is increased but the results are superior; and he should be more inclined to delegate authority for performance of routine matters.

Attention has not been given to the difficult problem of validating the accuracy of the information received. This important consideration is covered in great detail as a pure concept in other chapters of this book. The main concern of this chapter thus far has been to examine the various ways in which an alert executive might become aware of the possible need for devising a plan. In a sense, it was designed to demonstrate that much planning can be of the preventive rather than corrective type, and that, at their best, plans can anticipate future events.

DIMENSIONS OF A PLAN AND SOURCES OF IDEAS

There are two ways in which dimensions of a plan might be related to the source of ideas, suggestions or directives that serve to initiate the planning process. One approach is to attempt to determine (for a given dimension or combination of dimensions) the most likely source of ideas. It could be said that ideas for a new plan which is fairly significant, comprehensive, long range, formal and authorized, are more likely to come from superior managers, board of directors or formal planning group than subordinates, employees or formal controls.

A second approach, and the one that will be developed here, is to view the dimensions of a plan from the point of view of the planner and the way in which he is likely to approach the problem of keeping himself informed of ideas and suggestions important to the success of his unit and the company. To avoid confusion regarding the use of dimension of a plan, it is well to remember that we are looking at the first stage of the planning process from the point of view of the person who will be primarily responsible for the preparation of the plan. Thus a suggestion in the area of product style or product line would result, if developed beyond the "idea" or "suggestion" stage, in the preparation of a plan which would probably be classified as significant. When we say a plan is significant—even though no more than the idea has been presented—we

mean that the plan which is likely to result if the idea is developed will be a significant plan. The intensity of a given dimension can usually be determined at the time new ideas or suggestions are presented. The greater the complexity of the plan, the greater the likelihood that:

the planner will wish to use formal controls where significant variations can be fairly easily identified

perpetual study and management observation and contemplation as well as management suggestions will be useful for improving upon existing plans.

The greater the significance of a plan, the greater the likelihood that the planner will find it advantageous to

use formal controls and audits to gauge the progress of an existing plan

use perpetual study, management observation and contemplation, and management suggestions to seek out ideas for new plans or to make present plans obsolete

spend considerable time, effort and money to develop a rapid, accurate feedback on results of current plans and to develop all useful sources of new ideas.

The greater the comprehensiveness of a plan, the greater the likelihood that the planner will find it desirable to use systematic audits to gauge progress of existing plans; perpetual study as a source of new ideas; and the board of directors and management suggestions as a guide to possible changes in an existing plan or the need for a new plan.

The other dimensions of a plan will also have an influence upon the source of ideas and information that the planner is likely to use. We have illustrated only three of these to give a broad indication of the kind of influence that might be exerted. In addition to the dimension of the plan, the use of one or more of these sources is influenced by such additional factors as the philosophy of management held by the planner and various levels of management including the board of directors, the nature of the business and the specific type of plan an executive is responsible for, and the general qualifications of the planner.

DETERMINING CAUSES OF THE PROBLEMS WHICH NECESSITATE PLANNING

Once an executive is aware of a problem area or a possible opportunity to increase company profit, or to reach any other company goal, he must attempt to isolate the causes so that a meaningful objective can be established. This section of the chapter will be used to examine some of the factors which affect the problem of determining the cause behind the need for preparing a plan. The following conditions influence the determining of cause: source of ideas, nature of the plan, available guides, past

experience of company, experience of others, qualifications of the planner, time available, and relative cost in effort and money.

Source of idea—provides initial direction

Not infrequently, the cause of the difficulty or the specific nature of the opportunity can be determined, at least tentatively, by reference to the source of the idea. The grievance filed by a union out on a wild-cat strike may claim dangerous working conditions or other unfair labor practices which are stated in rather specific terms. A group of former customers may have changed their source of supply because of relatively high prices or poor service or quality of goods furnished by the previous vendor. These reasons might have been supplied by customers upon request of the vendor. In cases such as those illustrated above, it is relatively easy for the planner to determine the cause behind the need for formulating a plan. A word of caution should be given to the unsophisticated planner. The explanation given by individuals for their behavior may be incorrect. Some individuals may deliberately mislead the planner while others unintentionally give false reasons for their actions.

Nature of the plan or its components

It is relatively easy to determine causes, on occasion, because of the nature of the plan. A compensation program which has become obsolete because of its failure to change as competitive rates change may suggest the cause for the company's failure to hire or keep skilled employees. The breakage or wearing out of a machine or product part may isolate the cause of machine stoppage or product failure to one part.

Available measurement guides

At times the reasons for failure of the present plan are plural, and the plan is fairly complex. Under these conditions the planner, if qualified, may wish to use some rather sophisticated tools of measurement. The failure to meet the sales forecast may have been caused by such things as poor style, quality, service, promotion, or high price. Determining the exact cause or causes may require the use of marketing research or industrial experimentation. Frequently, the use of such tools requires the services of a specialist.

Time available

One of the most serious problems facing many planners is the time pressure to get a plan revised without delay. This may lead to hasty and

inaccurate assignment of cause, especially when results obtained were significantly different from anticipated results.

Time becomes a problem because the determination of specific cause, especially for complex and comprehensive plans, may require the use of sophisticated tools of measurement. The time required for the entire investigation process may extend into weeks. When adequate time is not available, there is the danger that a snap judgment will be made by the planner.

When plans are highly significant and complex, the planner can frequently solve part of the time problem by conducting rather continuous studies or by using sequential analysis.

Experience of company

As managers become experienced at the art of managing, they build up a backlog of experiences which they can call upon when faced with current problems. The same is true for a company as a total unit. The good planner tries to anticipate expected results from a given plan by checking company records and other recorded experiences before a plan is introduced. Quite obviously, managers are frequently unable to predict the behavior pattern of persons affected by a plan because of the many factors which influence human behavior. Some of these factors are beyond the control of the planner and function quite independently of company plans.

Experience of others

Some of the more difficult plans to control are those which occur rather infrequently. Under these conditions, a planner may have little if any company experience to serve as a guide in formulating or checking plans. The introduction of an incentive system or a fully automatic production line or the use of a new channel of distribution may result in acts by employees, customers, or distributors quite different from those anticipated by the planner. When faced with worker resistance or their failure to meet established goals, the planner may first examine the technical parts of the plan. Such items as the work method, time study and incentive rate might be checked for accuracy. After these are checked and found to be satisfactory, the planner may then question the attitude of the employees. If he has friends responsible for similar work in other companies, he may wish to seek their counsel. Of course, the good planner would have done this in advance, but it should be emphasized again that even the best planner cannot always anticipate every eventuality.

His associates may suggest one or more possible explanations—other than the technical accuracy of the plan—for the failure of the incentive

plan. Workers often resent the introduction of a major plan when they have not been given advanced knowledge of its introduction. When productivity is increased rather significantly, even when an adequate incentive wage is given, workers are often concerned about job security in the future. With the advice he has received, the planner is in a position to narrow his search and to direct his investigation to the more likely causes of the difficulty.

Cost in effort and money

Just as the factor of time may be a restraining influence, so too may the effort and money requirement hinder the planner in his search for the cause behind the need for a plan. As plans become fairly complex and comprehensive, the task of collecting and processing data often becomes expensive and difficult to accomplish. The planner must attempt to measure the relative cost of securing the desired information and the expected benefit to be derived from use of the information. As plans become less significant, the amount of effort and expense that should be expended is reduced.

Qualifications of the planner

Of course, nothing that has been described above takes place without deliberate action by someone. The qualified planner will be able to use the most advanced techniques of data collection and processing and of decision-making and testing. He will establish lines of communication and bonds of cooperation with units within and outside of the company to facilitate his prompt notification of need and to assist him in obtaining information to bear upon his problem area.

The determination of cause becomes easier to the extent that plans and components of plans are fairly simple and restricted. As plans become more complex, comprehensive, and significant, the difficulty of determining cause not only increases but the *need* for a fairly accurate statement of cause also increases. Under these conditions there is a greater likelihood that:

more sophisticated tools will be used
specialists will be consulted
considerable time and effort may be expended
a variety of approaches will be used
cost of determining cause will be less important.

4

THEORY OF CHOICE

MOST PLANS RESULT FROM AN evaluation of two or more alternative courses of action. As plans become more comprehensive, complex and significant, the number of components of a given plan tend to increase. Each component in turn may result from the consideration of several alternatives. This chapter is concerned with the process whereby alternatives are selected and evaluated and a specific plan is decided upon.

The assumption is made that the need for a plan is already recognized and that the planner is ready to begin the process of selecting alternatives. The further assumption is made that the company is operating under a set of established policies and procedures. This is done to facilitate the use of examples and to maintain a continuity of thought throughout the chapter.

OBJECTIVE

The concept of objective or goal in planning should be viewed from two points of view.

First, there is the objective of the firm as a unit which gives direction and guidance to all members of the organization. Second, there is the objective which is assigned to each plan regardless of its complexity, importance or comprehensiveness. A statement of objectives is necessary to facilitate the preparation of all plans. The objectives of the company are discussed first since they condition all other objectives.

Objective of the firm

In a capitalistic economic society it is usually assumed that the objective of each business firm is to maximize profit. Thus all major company programs such as new facilities or additions or product development are viewed in light of their capacity to contribute to profits. Where alternative plans are available, the choice of one over all others will be based on the maximum contribution to profits. Note that at this stage reference is made to the motive, not the ability of the executive to measure relative contribution.

In more recent years, arguments have appeared which contradict the premise that all businesses are operated to maximize profits. There appears to be significant evidence that motives such as desire for security and stability, fear of government or union action or fear of inviting competition may influence the choice of a given plan. The point of this discussion is not to attempt to prove or disprove these arguments. It seems rather obvious, however, that the rejection of a given plan because of the fear of adverse reaction of government, unions, competitors or customers is simply recognizing two undesirable possibilities. Either the short-run plan will not be realized because of the above influences, or, if realized, the long-run profit picture is likely to be affected by action of one or more of the above groups. In either case, the planner is able to evaluate the relative advantages (short- and long-run) of alternative plans.

In those cases where an objective other than profit maximization is used, a strong argument can be made for considering profit maximization along with the other objective. In doing so, the planner is able to determine the economic cost of following the nonprofit maximization objective.

Objectives of individual plan

All plans subordinate to the major plan of the corporation should conform to the objectives of the corporation. Thus if the objective of the corporation is to maximize profit, the objective of the marketing plan should be to maximize contributions to profit. The objective of the production department might be expressed as the minimization of cost for various levels of production.

To the extent that the number of plans and the frequency of preparation of each increases, company facilities are geographically separated, and authority is delegated to subordinate units, it becomes increasingly difficult for top management to insure that all plans conform to the over-all objective of the firm. There are a number of things that can be done to reduce the disparity that may exist between the over-all objective and objectives of lesser plans. Among these are:

The provision of adequate policies and procedures to cover significant areas.

Placing responsibility for approving plans high in the organization structure.

Providing decision rules for all levels of management.

In the discussion of company-wide objectives, consideration was restricted to the major guides that would be used by planners at all levels to assist in evaluating alternative plans. One plan becomes superior to another to the extent that it satisfies the objective of the plan. Of course, objectives are usually thought of in an additional light. Each plan is prepared to satisfy a given purpose. Thus, there are advertising plans, compensation plans, purchasing plans and so on. Each plan, in turn, may have subordinate plans (components of major plans) such as the selection of vendors and economic lot-size purchase plans. The intent is to prepare the best possible advertising, compensation and purchasing plans. The important point is the measure of the best possible plan. It has been suggested that the best plan is usually the one that maximizes contribution to profit over the long run. Should another measure of "best" be used, then it will become the objective to be maximized.

SELECTION OF ALTERNATIVES

When a company is faced with the problem of preparing a new plan or modifying an existing plan (see Chapter 3 for a discussion of theory of need determination), it will usually discover that there are various possible solutions to the problem. The problem is to evaluate all significant alternatives. Emphasis in this section will be upon the selection of alternatives for operating plans rather than objectives, policies, or procedure.[1]

[1] Note in the following pages that the procedure used is the selection of alternatives, determination of variables, assignment of quantitative value to variables and determination of their economic relationship, assignment of probability values to variables, and decision on a plan.

Some readers may question the departure from the more traditional approach of selection of alternatives, determination of wanted consequences, and determination of unwanted consequences.

The newer approach is used because it fits in more easily with the newer mathematical tools of decision-making.

The natural inclination of a planner might be to try out all possible alternatives. In some instances this may be a satisfactory approach. Quite frequently, however, the number of alternatives is so great and the cost in time and money of evaluating all alternatives is so large that it is not economically or strategically sound to follow this approach.

There are a number of factors which influence the selection of alternatives. The more important ones are discussed here.

Objectives of the plan—unit, department, company

Probably the most significant guide available to assist in the selection of alternatives is the objective to be served by the plan or components of the plan. A salary compensation program may be found to be weak in the area of providing adequate monetary incentive for above average employees. Rather than concern himself with fringe benefits and promotion opportunities, which are of great importance, of course, the salary administrator may choose to confine his study to the restricted area of salary range and movement within the range. There will then be two major sets of alternatives. One would be concerned with the extent of the range between minimum and maximum and the other with the means by which an employee moves up from the minimum to the maximum. Three alternatives are usually considered under the second set. These are: automatic step progress measured in time units, merit rating or performance review which presumes to measure individual contribution, or a combination of the two with automatic progression being used up to the mid-point and measured performance from the mid-point to the maximum.

It should be emphasized that the salary administrator may decide to expand his study to include selection techniques, induction methods, on-the-job training, turnover, promotion opportunity and the entire salary package. In the example above it was assumed that the salary administrator had interpreted the problem of dissatisfaction or turnover as being caused by inadequate monetary incentive. He may have decided further that all other personnel practices are sound. With this decision behind him, he then isolated the area of difficulty to be that of salary range and movement within the range. Were the administrator not sure of the exact cause of the difficulty, he might have added one or all of the significant areas in the total personnel program.

To be fully realistic, it is quite likely that the administrator made a quick mental check of all possible areas of difficulty and discarded all but the selected items. It is also likely that he has had past indications that a major problem was developing within the area selected. For example, the company may have experienced difficulties in the recruitment of

highly skilled personnel, the persons interviewed expressing dissatisfaction over the wages offered.

A second example might help. A company selling a consumer product nationally may have witnessed its sales fall significantly below its scheduled volume. This relatively poor showing could be attributed to one or more of several causes. The price may be at variance with the market price of competitive products, the product may be of relatively poor quality or design, the package may have similar shortcomings, the advertising appropriation may be insufficient or the program of poor quality, the sales force may be inadequate or improperly trained or under-compensated. After careful study the sales or marketing manager may decide that his major problem centers around the sales force, and this then becomes the object of his plan for correcting the poor sales record. His next step may be to list the various factors to be considered. They could include, among other things:

1. Qualifications used for selecting salesmen
2. Selection techniques, including sources of applicants
3. Induction program
4. Compensation plan
5. Quota system
6. Territorial assignment

After further study, the sales manager may pinpoint the problem to the compensation plan which is straight commission. This becomes the objective of the immediate plan. The likely alternatives may be:

1. Continue to use existing system of straight commission.
2. Modify existing system to include an advanced allowance of about 60 per cent of expected earnings.
3. Drop present system and substitute full salary system.
4. Use Item 3 plus a bonus system.

The key to the two examples used in this section was the objective of the plan. When it is stated clearly and precisely, it should help in the elimination of irrelevant alternatives.

Existing policies and procedures

A second important factor which tends to limit the number of alternatives which may be used is the operating policies and procedures, as well as customs and habits, of the department and company. In a sense the planner could say to himself that there is no purpose served in considering alternatives that top management will not allow. The purchasing agent may have authority to order certain parts and tools for replacement purposes. The company's policy relative to making or buying, reciprocity

in purchasing, diversification of sources of supply, hand-to-mouth versus scheduled buying will all affect the number and kinds of alternatives open to the purchasing agent.

Most executives have faced the problem of attempting to retain an outstanding employee who has tendered his resignation. When the reason given by the employee for leaving is the level of pay and lack of opportunity for promotion, and when his superior decides that these are the true causes of his dissatisfaction, the normal inclination of the superior is to see what he (and the company) can do to make the employee's present job more attractive. If the company has a policy of limiting salary increases to the established maximum of a range and promoting employees on a modified seniority and ability plan, and if the subordinate is already at the top of his range and relatively low on the seniority list, the alternatives the superior might consider in attempting to persuade the employee to remain are limited.

In a very real sense, policies and procedures not only guide the planner, but they tend to expedite the planning process by restricting the area of free choice. There are times when this alleged advantage may be more of a disadvantage, especially when it is overzealously interpreted and used by subordinate officials. Although policies and procedures are not made to be broken, the real test of their value is in their effectiveness in furthering the welfare of the enterprise. Subordinate officials should not be reluctant to recommend plans which are in conflict with established policies and procedures when they are convinced a modification or broad interpretation of a policy would improve the company's position.

Available resources

Resources as used here refers to all the assets of the company—money, materials, manpower, and machines and equipment. In the example above it can be assumed that the company has no fixed policy regarding compensation and promotion and, in fact, its entire personnel program has been modified from time to time to accommodate individual emergencies. Still the superior may know, or discover by verbal check with a superior, that the company cannot possibly meet the salary requirement because of the lack of adequate income and the fact that promotional opportunities are far distant because of the scarcity of senior level positions and the low turnover of executives.

When a machine breaks down, the planner might wish to consider acquiring a more efficient, fully automated machine as a replacement. Knowledge of the relatively high price of the automatic machine and the financial position of the firm might be sufficient to prompt him to drop this possibility as a logical alternative.

A purchasing agent might be deprived of taking advantage of quantity discount or reduced transportation cost because the firm can only buy on a hand-to-mouth basis. Certain extremely well qualified applicants may not be considered for employment because the company does not possess the opportunity for personal development and promotion or adequate salary to retain the employee if he were hired. A company which is asked to bid on a large contract may have to consider the possibilities of subcontracting, performing overtime work, and even expanding their production capacity because existing facilities are inadequate to meet the desired deadline.

It is recognized, of course, that the level of existing resources within themselves need not be the chief limiting factor. A company may well expand beyond its existing limit. And this should be borne in mind before an alternative is rejected. Nonetheless, there is a practical area of limitation which will place a realistic curb on the number and kind of alternatives chosen.

Time available

Usually an increase in the number and variety of alternatives used will result in an increase in the total planning time. There are occasions when time is the most important element and the plan adopted must conform to this limiting factor. A product placed on the market with high expectation of success may founder and become a drug on the market. If it is a highly styled and somewhat seasonal item, it may be imperative that quick action be taken to improve its appeal to the potential purchaser. This may result in the consideration of relatively few, rather than many, alternatives and subalternatives.

If a line is geared for mass production, and an important machine repeatedly breaks down, a rather quick decision may be made to replace the machine as quickly as possible with little regard to price or source of supply. Or, using the same example of a mass production facility, assume that a major supplier experiences an unexpected walkout which is expected to last indefinitely. If the raw materials or parts are essential, and if they are needed without delay, a shifting of suppliers may be required. The alternatives considered here may be quite different from those used to select a permanent supplier under normal conditions.

Cost—effort and money

Since planning is a continuous and all-encompassing function, every manager is faced with the daily problem of choosing courses of action. As additional alternatives are considered, particularly as they tend to go beyond the standard or customary choices, the efforts required to select,

prepare and arrange the necessary data may increase greatly. With each new plan, the decision may rest upon a determination of relative cost over possible increase in revenue contrasted with other alternatives considered.

In the selection of channels of distribution, plant sites, sources of executive recruits, sources of material supply, equipment replacement, machine layout, methods of setting work standards, and compensation plans for executives, a point is reached, before all conceivable alternatives are studied, where the incremental cost is greater than the incremental value of the new alternatives to the planning process. In the above-mentioned cases, it is quite likely that a fairly long list of alternatives will be initially prepared and then pruned before a detailed study is undertaken of the finally selected alternatives.

There are other cases where the total size of the project could be so large that the planner would simply reduce the scope to a workable size without specific regard to the added value of an alternative. Most of the examples used above would also apply here.

Significance of plan or component

When a plan is of such great importance that the success or failure of the plan would result in significant savings, increased revenue, or increased cost or loss of revenue, it is likely that a fairly large per cent of all possible alternatives will be considered. The existence of established policies and procedures, available resources and time and effort will become less restraining.

A situation frequently exists where significant plans are prepared which almost seem to contradict the statement above. That is, relatively few, rather than many, alternatives may be considered because the very nature of the plan tends to reduce the number of logical, acceptable choices. In selecting a vendor for a precise and expensive piece of equipment, sources of executive recruits, or channels of distribution for a highly styled shopping good, consideration may be given to just the few top possibilities because most of the other possibilities simply could not supply the desired service.

Custom of the trade

One of the most frequently used guides in selecting alternatives is to consider the practices of the industry and particularly major competitors. These trade practices are more likely to set the minimum rather than the maximum number of alternatives considered. In fact, there is grave danger in simply following the pack because it tends to work against innovation and initiative and may limit a company's leadership role.

Frequently the impetus for changing a plan or preparing an entirely

new plan comes from an executive's observation of actions of competitors. It is quite natural that one would be inclined to consider the economic reasonableness of adopting obviously successful practices of others. There are many examples of standard practices as well as innovations by leaders which are copied and in time become standard for the industry.

In the area of wage and salary administration, the introduction of the cost-of-living or escalator clause, the annual improvement factor or productivity clause, and the supplemental unemployment compensation provisions caused many salary administrators to consider these new alternatives along with the more standard provisions in a total wage or salary program. The marketing executive, particularly when he is associated with a company producing convenience and impulse goods, has found, in recent years, that it is useful to consider non-traditional channels of distribution. This expansion of reasonable alternatives is due partly to the diversification of product line of many conventional retailers. Drugstores handle many non-drug items and grocery, variety, and hardware stores handle items quite apart from their former limited specialties. This change in the distribution pattern across the nation forces the intelligent marketing planner to consider new channels for the distribution of his goods. The new advances in shop automation and office data processing have forced plant engineers, works managers, purchasing agents, chief accountants, office managers and others to broaden their base of analysis when machines and equipment need replacement.

Frequency of preparation

When plans are prepared infrequently, there is the tendency to use more alternatives than is the case for more frequent plans. Part of the reason for this is the length of the time interval between plans. The longer the time interval, the more likely that changes will occur within the environment, thus requiring the consideration of more alternatives. All of the examples given in the preceding section could apply here. When plans are revised fairly often, slight changes in the environment can be included in the planning process without adding a large number of alternatives for any one plan. Cumulatively, of course, a very large number of new alternatives might be considered, but since they are spaced over many plans covering the same objective, the impact is not great at any one time.

A second reason for the use of relatively fewer alternatives for frequently prepared plans is that when one or more alternatives proves unreliable or useless, they are eliminated. A constant pruning takes place. On the other hand, the alternatives which prove useful and reliable tend to carry the burden and they become a permanent part of the planning

process. Other alternatives may be brought in only when these are no longer satisfactory or when outside conditions warrant the inclusion of one or more additional alternatives.

Under normal conditions, a job shop operation might be handled on a fairly routine basis. The acceptance of a contract, the setting of a delivery or completion date and the pricing of the service can be routinely determined by referring to the blue print, bill of materials, standard cost sheet, present production schedule, work standards and the like. Each day several orders may be processed with a production plan being prepared for each. Even where there might appear to be several alternatives, such as in the choice of a specific machine or worker or hour to initiate work, the choice is quite limited by the work already scheduled. In reality, there might be just one machine that is the logical choice at a definite hour of a given day.

Two complications might enter this fairly routine planning process. The desired completion date might be unobtainable under existing conditions. The production planner might then be faced with a whole new set of alternatives. Some alternatives he may wish to consider:

1. Refuse the order.
2. Attempt to persuade the buyer to accept a later delivery date.
3. Subcontract part or all of the order.
4. Work on an overtime schedule.
5. Reschedule existing work.
6. Add sufficient capacity to complete the order.

A second complication could result from the receipt of an order which contains design specifications for certain components of the product which cannot be handled by the company because of the lack of specialized equipment. The alternatives the production planner might wish to consider are:

1. Refuse the order.
2. Subcontract the difficult parts.
3. Attempt to have the parts redesigned to accommodate company equipment.
4. Add the necessary specialized equipment.
5. Take only that part of the contract which can be handled under existing conditions.

In each case a variation from routine generated the need for considering a new or different set of alternatives. Were these two conditions combined, i.e., inability to meet both the schedule and the product specifications, the number of alternatives would be even greater. The assumption thus far has been that these conditions occurred quite infrequently and that at each occurrence a new plan had to be decided upon. If the as-

sumptions were changed so that the frequency of occurrence was greater, it is quite likely that these alternatives would be handled in a more routine fashion. The decision to use or not to use subcontractors would be a matter of policy as would be the use of overtime work. A separate decision may not have to be made each time a new order is received.

Qualifications of planner

Although all the other factors influence the choice of alternatives, none is more important than the qualifications of the planner. To consider nonroutine and nonobvious alternatives requires considerable intelligence and imagination, and in many cases, courage. The leader in the field, by definition, must be a pioneer. And he may pioneer in one or more of many ways. The first "five-dollar day," the annual improvement factor, the cost-of-living adjustment and supplementary unemployment compensation were all departures from traditional personnel practices. The assembly line, the self-service store and the small car are also significant variations from long-standing practices.

The attribute of personal fortitude is important for the planner to allow him to withstand the barbs he may receive from personnel within the company as well as from the market. Change in itself frequently generates doubts, confusion and distrust. Even when only one of the alternatives would result in significant change, there is the danger that it will be misunderstood and misrepresented.

A planner who is relatively new or uncertain of his position is likely to stay pretty close to the traditional patterns followed by other planners. On the other hand, if he has been brought in to a company to straighten out or beef up a department, he may have been hired because of the need for change and because of his demonstrated capacity to think independently and imaginatively.

It has been shown that the selection of alternatives is a function of the objectives of the plan and the company, the existing policies and procedures, the level and nature of available resources, the time available for formulating a plan, the cost in effort and money that would have to be expended to properly evaluate the alternatives, the significance of the plan or components, the custom of the trade, the frequency of preparation of the plan and the qualifications of the planners.

The conditions which are most conducive to the development of all useful alternatives are:

1. A clear definition of the objective of the plan.
2. A degree of flexibility in company policies and procedures.
3. A degree of flexibility in personnel and equipment.
4. Sufficient time to allow for necessary investigation.

5. A view of cost as a relative concept to be measured against expected results.
6. Use of custom of the trade as a general guide, but not to the exclusion of other considerations.
7. Occasional check of routine plans to see whether new alternatives are being used in place of traditional ones.
8. Qualified planners at all levels of the hierarchy.
9. Use of sophisticated tools of planning.

EVALUATING ALTERNATIVES

It should be clear that it is not possible to draw a permanent line between the selection of alternatives and the evaluation of alternatives. When fairly comprehensive, complex, and significant plans are being prepared, the elimination of one or more alternatives may occur at several stages. For example, the alternatives may be seven to begin with, then be reduced to five, then three or two before the final choice is made. Seldom will the jump be from seven to one. While the process of elimination takes place, one or more alternatives might be added. This is most likely to occur when a committee participates in the planning process.

Assigning significant variables to alternatives

Once the various alternatives have been selected, it becomes necessary to determine all significant variables. It might help to review in diagrammatic form events which have already taken place.

Need for plan determined — *Specific objective established* — *Decision made to formulate plan* — *Statement of alternative solutions*

The planner has as a frame of reference the conditions which caused the need for a new or revised plan, the specific objective to be served by the plan and the various alternatives available. His task at this stage is to select all significant variables so that a logical comparison can be made.

The selection of significant variables is influenced by such factors as the nature of the plan and its comprehensiveness, the importance of variables to the plan, past experience and practices of the company, the experience of others, the time available for formulation of the plan, and the qualifications of the planner.

Nature of the plan

As plans extend their influence over several departments, the variety and number of variables that might logically be considered becomes

large. One alternative that might be considered by a company contemplating its products for the following year is the introduction of a highly styled new product. The problem is to determine which of several possible styles is preferable. Some of the more important variables which would probably be considered are the impact of new product style on:

sales of existing products
profit picture of company
existing production facilities
existing manpower resources
existing distribution structure

Plans which are more restrictive may not have to consider consequences which would influence other units. Following are examples of other plans and possible variables.

Vendor Selection	*Plant Site Selection*	*Economic Lot Size*
Price	Water	Yearly requirement
Discount policy	Power	Set-up cost
Quality of output	Raw material	Carrying cost per piece per year
Capacity	Labor	
Reliability	Taxes	
Distance	Markets	

Importance of variables to the plan (desirability)

It has already been noted that it is difficult to draw a line separating the various stages in the planning process. In this chapter the procedure followed is to list variables and then assign values and probabilities. A large variety of possible variables for given alternatives might flow through the mind of the planner. The variables which he may record, or keep at a later stage, will be strongly influenced by his mental assignment of value. As the number of possible variables increases, there is the greater likelihood that he will omit the less important ones. A detailed treatment of the problem of assigning value to variables is given in a separate section of this chapter.

Past experience and practices of company

As the years pass, the many problems which beset a company tend to repeat themselves. Although they appear in slightly different, specific form, the general nature of the problem does not vary significantly. Some general examples would include product innovation, changes in work procedures and standards, machine and equipment replacement, and advertising and sales promotion programs. It should be emphasized again that the only thing being considered at this time is the selection of variables for the alternatives being considered. The actual significance of the varia-

bles and the likelihood that they will occur as expected are treated in a separate section.

As a company has repeated experience with a given type of plan, it should learn by viewing its mistakes as well as its successes. The introduction of a technically sound wage incentive or bonus system may have failed because, as discovered later, the employees were not informed in advance of its introduction. The next time a similar plan is to be introduced, the relative ease of understanding a program might be considered. Or, in purchasing a new piece of office equipment, consideration may not have been given to the specific assignment of the machine to a given employee. If the new machine is superior in design and efficiency to all existing machines and it is assigned automatically to the person whose machine has been replaced, some difficulty may develop. If the person receiving the new machine is relatively young, new in the organization and average in work output, other members will probably resent the assignment. The next time a new machine is to be assigned, the planner might wish to consider the consequences that would result from using the same method of machine assignment.

Experience of others

When a company is relatively new or is facing a new problem, it may not have reliable guides to follow from its own past experience. It may be helpful in these cases to learn from the experiences of others. The concept of "others" should be thought of in the broadest sense possible and would thus include information obtained from direct interview as well as secondary sources such as trade publications. When major plans are being formulated it is quite likely that interested suppliers (in regard to major installations such as automatic data processing equipment) distributors (in regard to major changes in style, design, price or merchandising practices) and consultants (in regard to a new compensation program, for example) will prove to be useful sources of information.

Time available for formulation of plan

The factor of time permeates every phase of the entire planning process. As in the original selection of alternatives, the selection of all possible variables is usually less complete and precise when the time period is short. The best approach in these cases is to pick out the more important variables.

Qualifications of planner

Usually, the person who selects alternatives also determines the significant variables which will be used. Thus, what has already been said

about his qualifications under the topic selection of alternatives would apply here. One additional point should be made, however. The problem of determining all possible variables is often considerably more difficult than that of selecting alternatives. This is so because the actual variables to be considered result from the expected behavior of people as well as equipment or machines. It is quite difficult for one or a few persons to anticipate accurately the various reactions of employees, customers, suppliers and others to a given plan. Assistance can be had by consulting with specialists and other members of the company. The important point is that the planner should be sufficiently skilled to know when he needs help and to know where help can be obtained.

In summary, the selection of possible variables is a function of the nature of the plan, the importance of the variables to the plan, past experience and practices of the company, the experience of others, time available for formulation of the plan, and the qualifications of the planner.

Determining value of each variable and economic relationships

In the section on determining the important variables, the emphasis was placed on the simple listing of all significant variables. In this section, attention is directed to the problem of assigning precise values to each variable and indicating the economic relationship. These values must be expressed in units which will allow for ease of comparison among alternatives.

The assignment of values to expected significant variables is influenced by the nature of the expectation, existing policies and procedures, company records and experience, experiences of others, the relative cost in effort and money, the time available, and the qualifications of the planner.

It should be emphasized again that this section does not concern itself with the probability that the expected events will occur. This problem is treated in the next section.

Nature of the expectation

The ease or difficulty of assigning precise and accurate values is influenced more by the nature of the variable than by any other factor. Some items, such as the comparative cost of acquiring two new machines can be assigned fairly precise cost and revenue figures. For other items, such as the possible loss of an important executive, it is more difficult to anticipate results and thus to assign precise values. Even if it were known for certain that the efficiency of an executive would increase or decrease a certain percentage, it would be quite difficult to assign a value to the variation in efficiency. Note, however, that the problem becomes more manageable when relative costs or returns are considered. If the alterna-

tive being considered were to promote Executive A or B, the relative advantages and disadvantages to the company of promoting A over B or B over A would be determined. Assume that these executives are of equal ability and it is decided that if A is promoted, his value to the company will increase by 20 per cent but B's value will decrease by 10 per cent. On the other hand, if B is promoted, his value will increase 20 per cent and A's value will remain the same. If no other considerations were being used, B would be the man to promote.

Existing policies and procedures

The assigning of values is easier where company policies and procedures provide a guide to the planner. The cost of replacing an employee can be approached by considering the company's recruiting and selection procedures. How many recruits are usually screened before one is selected, how many sources of recruits are used, what information is required before a decision is made, and how long is the induction program? When an addition to the plant is contemplated, the relative cost per year can be determined in part by considering the depreciation and maintenance policies of the company. When a new machine is to be purchased within a short period, the relative cost of machines and the expected output can be determined fairly easily. The determination of the comparative advantage of one over the other is easy to make if the policy of the company is to set work standards by use of time study. Assume that a new wage program is being considered in which job evaluation will be used for the first time. The company may decide that as a matter of policy the new wage curve will not be used to lower wages of incumbents, but adjustments will be made to all employees whose new job rating places them in a higher pay bracket. With this policy statement, the salary administrator can make a rather satisfactory estimate of the comparative cost of various wage curves.

Company records and experience

Adequate records and experience are especially helpful to a planner when the plan being formulated is to be implemented within a short period of time and the duration of the plan is relatively short. The major danger encountered in the use of records and experience, of course, is that they represent historical data based on environmental conditions which may have changed.

The areas in which records and experiences are useful are almost unlimited. The average cost for hiring, placing, and training an employee, and for terminating his employment should be known. The average cost of placing a purchase order, maintaining a machine or heating a plant are

likewise known. Even when exact costs are not known, a reasonable estimate can often be made to cover such subjects as the cost of introducing a new product and the loss due to poor packaging or handling.

When plans are to extend over fairly long periods of time, historical data are most useful in helping to project trends. If the company has a two- or three-year labor contract with built-in wage adjustments, and if it can negotiate fairly long-range raw material and construction contracts, it may be able to assign a fairly close cost estimate to various alternatives.

Experiences of others

It is quite natural to expect that there will be times when company records are inadequate or nonexistent as a guide for a given proposed plan. In many of these cases, assistance can frequently be obtained by studying the experience of others. This is particularly true in such areas as major machinery installation, significant procedural changes and new construction. Much of the information regarding the experiences of others is obtainable from consultants and equipment manufacturers. A surprising amount of information can be obtained, even with competitors in some cases, by personal observation and interview with managers of the companies one wishes to study.

The major problem here is that each company has an environment peculiar to itself and this environment contains individuals who act according to a prevailing frame of reference. What is true in one company may not be true in another.

Relative cost in effort and money

The assigning of precise cost to items of input or value to items of output is often quite difficult and costly. This is particularly true when there is no direct, proportionate assignment of cost or revenue to incremental units of input or output.

Many of the items already used as examples would fit here. Adequate records may be available to indicate average cost for selecting, introducing and training employees. Records might also be available for average machine down-time, maintenance cost and pilferage cost, but they may not be sufficiently processed in report form to be easily used. The effort and cost required to process these items may prohibit their use. It is interesting to note that there are times when the required expenditure of time and effort is not exorbitant but the planner fails to acquire all necessary data because of a personal feeling of indifference. In recent years, with the increased interest in the broad area of operations research, it has been found that many records previously adequate for the planning methods used in the past are inadequate for the newer

tools. The effort and expense required to develop a new record keeping and reporting system may be extremely costly.

Time available

Whenever the time available for preparing a plan is shorter than the desired time required for its proper preparation, there is the danger that only rough estimates of comparative input and output will be made. When the ideal plan cannot be prepared, it is wise for the planner to concentrate his attention on the more strategically important items in the plan and those which are inflexible once a commitment is made.

Qualifications of planner

The six items already covered in this section can help to make a planning situation easy or difficult. However, a well-qualified planner can often perform the function of assigning value more efficiently under difficult conditions than can the less qualified planner working under more satisfactory conditions. This is true because the assigning of value is usually not an automatic process, especially as plans become complex, comprehensive and extend over fairly long periods of time, and it usually requires the use of considerable judgment.

In summary, the assigning of value to variables is a function of the nature of the variable, existing policies and procedures, adequacy of company records and experiences, the experiences of others, the relative cost in effort and money of making value assignments, time available and the qualifications of the planner.

The greater the number and importance of value assignments which are made on some basis other than reliable facts,

the greater the desirability that a flexible plan be made

the greater the desirability that tentative commitments be made

the greater the desirability that tight control be exercised during the implementation stage.

ASSIGNING PROBABILITY VALUES TO SIGNIFICANT VARIABLES

Frequently, the most difficult part of the entire planning process deals with the determination of the degree of certainty to be assigned to significant variables. The problem of uncertainty exists because most plans are formulated in the present on the basis of future expectations, and one's knowledge of the future is incomplete. The production and purchasing schedule, for example, is greatly influenced by the level of anticipated sales. The sales level of a given company will be influenced by

such factors as market price, company product style and quality, level of disposable income and strategy of competitors. Some of these elements change over relatively short periods of time while others become meaningful only after consumers react to them in the market place. At best, the good planner can only hope to approximate the exact level of sales.

In attempting to determine the degree of certainty to be assigned to each significant variable, the planner is guided by such considerations as the nature of variables, existing policies and procedures, company records and experience, the experiences of others, the relative cost of measurement in effort and money, the time period covered, and the qualifications of the planner.

Nature of variables

When one deals in the area of human behavior, it becomes difficult to determine how an individual will react to a certain stimulation. Will an executive quit his job if he is not promoted? Will consumers purchase the newly-styled product in the quantities expected? Will efficiency in the shop increase if a new layout is introduced? These questions are difficult to answer. On the other hand, questions dealing with output levels of semi-automatic machines, maintenance cost or scrappage may be less difficult to answer. Assuming a given expected consequence, the remaining considerations (to be discussed below) will influence the accuracy (the likelihood factor) assigned to the consequence.

Existing policies and procedures

When a given component can be implemented by following an existing policy or procedure which has been tested in the past, there is a stronger likelihood that the outcome will be as expected. If a company has used time study to set work standards in the past, and the expected output of the new machine was determined by the same method, it is reasonable to believe that these new standards will not be challenged.

Company records and experience

One of the biggest aids to assigning levels of expectation is company records and experience. Although things which occurred in the past may not recur in a similar fashion, certain obvious trends can be discerned.

Certainly, successful experience with employees, suppliers, distributors and unions in the past would suggest, unless conditions have changed, the behavior pattern to expect in the future. Records of output, downtime, turnover, and distribution cost will also reduce the amount of uncertainty.

Experience of others

Since plans frequently contain components which are new to the company, adequate records and experience may not be available as a guide. Other companies, however, may have used a plan similar to the one contemplated. In these cases the planner can learn from studying the experiences of others.

Relative cost in effort and money

An attempt to determine the likelihood that events will conform to expectations is often an expensive undertaking. This is especially true when the actions of people rather than things are being considered. The use of such high-powered tools as motivational research, depth interviewing, psychological testing and industrial experimentation is expensive.

Time period covered

Time has two dimensions here. One is the time available before the decision has to be made, while the other is the time period covered by the plan. If a limited time period is available, it will often preclude the use of sophisticated planning tools and thus reduce the accuracy of the estimate.

When components of a plan require that fairly long periods in the future be considered, it becomes increasingly difficult to assign accurate levels of probable outcome. This is so because most factors influencing components of a plan are dependent variables. Their action is determined by other actions and events, which, in turn, are also dependent on yet other events. The action which will take place at a given time may not be known because the conditions which will exist are not known.

Qualifications of planner

As is true in all other stages of the planning process, the key person in the assigning of levels of probable outcome is the planner. His wisdom, judgment and experience enable him to assign more realistic values than the less competent planner.

The degree of certainty with which value can be assigned each variable is influenced by the nature of the variable, the adequacy of existing company policies and procedures, the adequacy of company records and extent of its experience, the possible use of experiences of others, the relative cost in effort and money of measurement, the time available and time period covered by the plan and the qualifications of the planner. The difficulty of assigning reliable estimates increases

the longer the future time period covered by the plan

the greater the number of expectations that are conditioned by persons outside the company

the greater the number of expectations that are conditioned by subjective decisions (value judgments) of persons concerned with the plan

the greater the social, economic and political dynamics of the environment which influences the plan.

The greater the number and importance of components which cannot be assigned a high level of certainty of outcome,

the greater the desirability that flexible plans will be prepared and used

the greater the care and control that will be desirable during the life of the plan

the greater the desirability that pretesting be done where appropriate.

DECIDING ON THE PLAN

Everything that has been done up to this point has been done in anticipation of the final decision stage in which a plan is accepted, postponed or rejected. Assuming that all previous stages have been handled properly, the planner has before him the following information.

(1)	(2)	(3)
Statement of objective of plan	List of alternative solutions	List of significant variables
(4)	(5)	(6)
Values assigned each variable	Probability assigned each variable (where necessary)	Selection of solution (to be accomplished)

It was stated that the value assigned each significant variable is expressed in terms logical to the plan. That is, the desirability of buying one machine rather than another is expressed in terms of relative cost of each machine per unit of production. The degree of certainty that events will occur as predicted may be presented in a variety of ways. Where the margin of error is not too significant, the general breakdown of very likely, likely, not likely may be adequate. A more precise breakdown might require the use of numerical comparisons: 50–50, 60–40, 80–20: or simply 100 per cent, 80 per cent, 70 per cent, 50 per cent. Quite frequently, especially when quantitative units are used, such as anticipated sales, production and cost, a schedule rather than a single value is used. A forecaster and market researcher might agree on the following sales forecast for the year:

70,000 units	certain	100 per cent
75,000 units	very likely	90 per cent
80,000 units	quite likely	75 per cent chance
85,000 units	possible	50 per cent
95,000 units	unlikely	40 per cent

Where a choice is to be made between two or more products or two or more styles for a given product, a separate schedule is prepared for each along with the expected cost and revenue.

It has already been said that the desirability of each alternative has been expressed in units that would allow the planner to tell the level of contribution each alternative will make to the stated objective of the plan. The objective may be to maximize profits by the most efficient combination of product, pricing, advertising and sales promotion expenditure and product styling. When the various alternatives have been examined and the results are expressed in terms of total dollar sales less total expenditures, the choice is fairly simple when one alternative will obviously maximize net return. It should be noted that there is the possibility that none of the alternatives initially presented will meet the stated objective. This is most likely to occur when the objective is expressed in terms of desired return on investment or share of the market rather than the best of available alternatives. When none of the alternatives is satisfactory, new alternatives may have to be considered or a more realistic objective established.

A complication is added to the problem above when the factor of uncertainty is introduced. The costs of styling, advertising and sales promotion may be fairly easy to control (although they will be difficult to predict) since they can be limited to a budget allotment. The results which will be achieved, however, are not so easy to determine with any great degree of assurance. The question here is not to determine the likelihood that anticipated events will occur. It is assumed that this has already been established. The question is what guides can the planner use to determine the best solution in view of the level of uncertainty and level of desired results?

Some of the more important factors the planner may wish to consider are the relative degree of uncertainty and reward, the nature of the uncertainty, company policy, alternative uses of resources (including manpower), the flexibility of the plan, the importance of the plan or component to the total plan of the company, the financial position of the firm, past results and future expectations, the attitude of stockholders, the attitude of government, and the qualifications and attitude of the planner.

For ease of presentation, each of these factors is discussed separately with no assigned priority. In practice many or all of these are considered

by a planner and he assigns various weights to each, depending upon the total environment in which he is operating.

Relative degree of uncertainty and reward

If the uncertainty is relatively great, the extra return relatively small, and the loss that would result from failure to meet objectives high, there is less likelihood that the alternative would be chosen than under reverse conditions. The more difficult problem faced is one in which the relative differences are not so great that the answer is fairly obvious. The factors which will be discussed now will help to narrow the choice.

Nature of the uncertainty

The planner may be uncertain of future events for a great variety of reasons. If he is considering the feasibility of replacing some units of existing equipment with a semi-automatic bank of equipment, he may be quite concerned about sales expectations. The break-even point for the new equipment may be 75 per cent of capacity, as opposed to 60 per cent for existing equipment. Above this level, however, cost per unit drops significantly as compared with existing equipment. The break-even point for the new machine is equivalent to 150,000 units and average annual sales, in the past, amounted to 145,000 units, which is above the break-even point for the existing equipment. The forecaster has estimated that 150,000 units could probably be sold over the next few years if the sales price were slightly reduced. The decrease in unit cost would be significantly greater than the reduction in unit sales price. Assume that the price reduction would increase the break-even point of the new machine to 155,000 units. The chances of selling 155,000 units at the lower price are thought to be fairly good. Some of the factors which will influence the actual level of sales are level of individual and family income, expected future level of earnings, price policy of competitors, and sales effort.

If the planner believes that sales effort is one of the most important factors contributing to higher sales, and if he thinks that the company can encourage its sales force to extra effort, he might be more inclined to order the new equipment. On the other hand, if he thinks that the actions of competitors or other business firms are the predominant factors influencing sales and that his company has little or no control over these actions, he might be less likely to order the new equipment. The key factor would be the amount of influence the company can exercise over the factors which influence the level of sales. When the company has greater control over significant factors, it may be more likely to follow the course that could lead to higher profits.

Company policies

The most useful guide is often the policy of the company regarding various company activities. The purchasing policy may be to select the lowest bidder when all other factors are relatively equal. A policy of reciprocity might be followed which would include a maximum limit allowed for paying above average prices. A pricing policy could state that the company will never be undersold. Or it could state that a given return on investment is desired.

The important point here is that a going concern usually has a number of helpful guides available to the planner in the form of company policy. This could even cover the area of uncertainty in which the absolute amount of uncertainty which is allowable may be set. Unless there appears to be a good chance of success, the alternative is to be rejected.

Alternative use of resources

To avoid confusion, it should be noted that frequently two somewhat similar situations may develop. The discussion thus far has dealt rather specifically with various alternatives that might be considered for a given plan and the selection of the best alternative to be incorporated into the final plan. The second situation goes a step further and considers the relative value of two or more acceptable plans. A plan may be drawn up for a job evaluation program in which the point-rating, factor comparison, classification and ranking methods were evaluated on the basis of relative cost of installation maintenance, ease of understanding and accuracy. As a result of the investigation, the point-rating system may have been selected as the less expensive at an expected cost of installation of $25,000 and the addition of one full time analyst to the personnel department. This relatively high cost may be significantly above the cost anticipated in the original proposal. As a result, a new alternative may be introduced which is quite apart from the initial study. Rather than use the resources for an improved wage structure, it might be preferable to consider adding psychological testing, an on-the-job training program or a recreational program. Here are three new alternatives introduced at this time because the available resources are sufficient for only one of the four. If the company already has effective programs in the three new areas mentioned, it is possible that the job evaluation plan would be vetoed at a higher level because a senior executive feels the expenditure could be used to better advantage in buying new equipment, renovating a building or beefing up the advertising program.

The alternative use of manpower resources, rather than financial resources, may be a major consideration in selecting a plan, especially where

the added revenue or cost reduction will not be significant. Many plans are to be implemented by existing personnel who frequently are fairly busy at performing their day-to-day chores. A new program which is an absolute addition to the work load—a new employee counseling program for example—or one which significantly modifies the work procedure—a new cost accounting system—may require considerable additional work on the part of employees. If handling the new chores requires a postponement of other necessary work, it may be desirable to hold off the introduction of the new plan.

Financial position of the firm

This factor is closely tied in with the above-mentioned factor of alternative use of resources, but it has at least one distinct feature. When a firm is in a financial position that provides a limited amount of working capital, and it is unable to obtain additional funds except through earnings from sales, it may have to postpone indefinitely the introduction of a plan which in all respects is a highly desirable plan. Almost any plan one might think of which would require an initial outlay of funds would fall within this category. The study may have been initiated with the understanding that if it is not too expensive and it is desirable, it will be adopted.

Flexibility of plan

To the extent a plan is flexible, the previous two factors may be less severe as restrictions on the adoption of a plan. Flexibility as used here has three dimensions—ease of termination without significant loss, ease of postponement once the plan is underway, and ease of modification arising from a divisibility of components. When a plan requires a total commitment which once made is irrevocable except at a significant loss, the planner may be somewhat reluctant to approve the plan unless the level of uncertainty is fairly low. On the other hand, if parts of a plan can be introduced separately in time sequence, and if each can be terminated or changed without significant loss of income or increased cost, the planner may be more inclined to adopt a plan with a high level of uncertainty assigned.

Importance of plan to total plan of company—interdependence

Some plans are reasonably self-contained in that their influence upon other units within the organization is not great. Quite obviously, every plan of every department and subunit has some influence over other units within the company by the very nature of the interdependence ex-

isting between departments. The important thing is in the size or magnitude of the influence as reflected in the repercussions that would follow if a plan succeeded or failed.

For a company geared to mass production and mass distribution, the purchasing plan would probably be classified as a key plan. When goods do not arrive on schedule or when they are of poor quality, the production and delivery schedule may be affected. In addition, if any serious delay should develop, workers may be sent home, work schedules reduced and promised delivery dates extended. When purchasing is so important to the welfare of the company, the planner is less likely to follow programs which have a high degree of uncertainty, and he would be more inclined to base his decision on factors other than minimum purchase cost.

Past results and future expectations

If a company has not been successful in recent years, it may be more inclined to substitute less return for less uncertainty until it gets back on its financial feet. Quite the opposite could be the case if it were felt that it is "now or never" for the company. The planner may be willing to take a chance on a "killing" if the company has been gradually losing ground and a look into the future would suggest no likely improvement unless drastic measures are taken. In recent years there have been several examples of major innovations in product styling and design where the initiative was taken by a relatively small producer who was financially weak. In equipment purchases a planner may elect to buy semi-automatic equipment to replace existing equipment even though the break-even point is somewhat higher than expected sales. The reasoning might be that the company cannot hope to compete cost-price-wise if it continues to use existing equipment while it will be able to compete with the new equipment. If sales do not increase to utilize the new equipment sufficiently, the company is no worse off than it would have been had it stayed with its old equipment.

Attitude of stockholders

Many of the major policies adopted by the company reflect the thinking of stockholders, but there are other considerations not covered by policy statements. Since the stockholders have, in reality, the final say on major plans, their views should be considered before plans are approved at a lower level within the organization. Some of the areas in which stockholders may be interested are: advertising layout and copy, advertising media used, product style, compensation programs for executives, plant design, and major equipment replacement. The executive

planner would do well to anticipate the possible reactions a given plan may evoke from stockholders.

In regard to both the uncertainty and amount of possible return, a group of stockholders may be relatively conservative or relatively liberal. If they are conservative they may prefer to accept a normal return that is fairly steady rather than take a chance on an above-normal return that is highly doubtful.

Attitude of government

As plans become significant and comprehensive, there is greater likelihood that the planner will consider the attitude of government toward the expected results to be achieved by the plan. Note that the existence of laws and ordinances is not the guiding factor here but rather the present and expected future attitude of government officials toward the enforcement and interpretation of existing laws and the promulgation of new laws.

The types of plans which may be influenced by the factors above are pricing policy or acquisition or merger attempts which would increase the firm's share of the market to such an extent that the government might become concerned over monopolistic tendencies of the company, advertising copy which makes questionable claims, and discriminatory hiring or firing practices. The problem is particularly difficult when there is pending legislation or a government committee is investigating certain business practices.

Qualifications and attitude of planner

Although the stockholders have final say and the attitude of government must be considered, the executive planner is the person who must judge the nature and strength of these two factors. Major plans are usually nursed through the executive committee and board of directors by the chief executive. His intellectual and character qualifications as well as his general attitude about economic and political matters in general will greatly influence his choice of a given plan.

If he is strong in his belief and disposed to "fight" to support his views, he may be willing to go against the expressed wishes of superiors as well as subordinates. It would be his intention to persuade the opposition that his approved plan is the best plan for the company. A second chief executive faced with the same situation might decide that he will go along with the wishes of his superiors. He may put up token resistance but he is not prepared to wage a bitter struggle for his program.

Thus, we see that the choice or rejection of a plan is influenced by the

relative degree of uncertainty and reward associated with alternative plans, the nature of the uncertainty, company policy, alternative uses of resources, the importance of the plan to the total plan of the company, the flexibility of the plan, the financial position of the firm, past results and future expectations, attitude of government and stockholders, and the qualifications and attitude of the planner.

Two points should be made at this time. First, a given plan may require the consideration of only one, a few or all of the factors listed above. Secondly, one or more of the above-mentioned factors may have been considered at some previous stage of the planning process—the selection of alternatives, the determination of significant variables, or the assigning of levels of value and uncertainty to each variable. Where there are two or more alternate plans designed to serve the same general purpose or when a selection is to be made from two or more different plans the choice is made easier to the extent that:

there is a significant difference in reward and level of uncertainty between plans and both variables move in the same direction, i.e., greater rewards and less uncertainty or less reward and greater uncertainty

where uncertainty does exist, many of its components are at least partially controllable by the company

all major components of the desired plan can be adopted under existing company policy, while other plans would require some modification of policy

the plan can be financed from internal funds

the desired plan has greater flexibility than other alternatives

the plan can be introduced without reducing the level of efficiency of the company in other areas of performance

the plan is important within itself but it has no significant influence on other company plans

the company has been successful in the past and anticipates continued success

stockholders will probably support the plan

government attitude does not play a significant role

the planner is qualified in every respect.

Whenever one or more of the conditions above change, the task of the planner becomes more difficult. When there is no clear-cut answer, and the plan is fairly significant, the planner can attempt to influence some of these factors before a plan is decided upon. Company policy might be changed as well as the attitude of a few important stockholders. An interview with government officials might give additional insight into the likelihood of adverse government action. The point is, that for significant plans it is likely that two or more stages of planning will take place when a fairly obvious alternative does not result from the initial array. When the plan is of sufficient importance, additional

information may be called for which would cover areas not originally included.

If two plans appear equally desirable and they are postponable, the decision may be to wait until the last possible moment with the hope that conditions may change which will affect one or more premises used. When a decision must be made, and it cannot be conditional, the planner must use judgment. As a matter of fact, the astute planner can usually find one or more reasons for selecting one plan over another. For example, if one or more persons or units were to be affected by one plan and a different group by another, the choice might be made on the basis of the relative need, psychologically, of one unit over another.

DIMENSIONS OF A PLAN AND THE THEORY OF CHOICE

We have examined in some detail the various factors which influence each stage of the decision-making process. Let us now examine the relationship of various dimensions of a plan to the theory of choice or decision-making.

The greater the significance of a plan, the greater the likelihood that the planner will find it advantageous to include a greater variety of alternatives; to include a larger number of variables; to use sophisticated techniques to project the value and degree of certainty of future inputs and outputs; and to use sophisticated techniques of decision-making.

The greater the complexity of a plan, the greater the likelihood that the planner will find it advantageous to seek assistance from specialists; to pretest the plan before making a final decision; to use sophisticated techniques to project the value and degree of certainty of future inputs and outputs; and to use sophisticated techniques of decision-making.

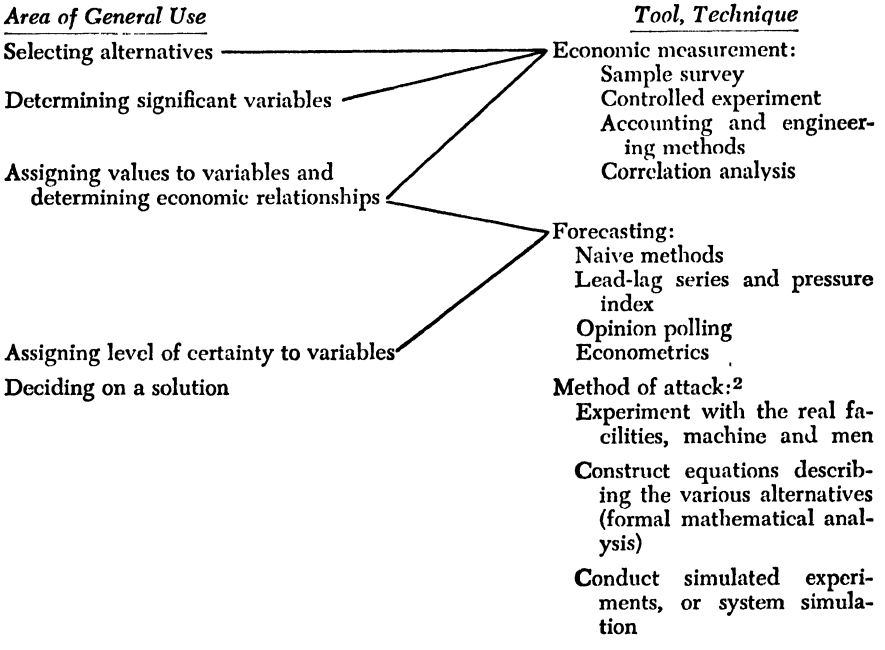
The greater the comprehensiveness of a plan, the greater the likelihood that the planner will find it advantageous to use a committee to assist in presenting and evaluating alternatives and variables; to include on the committee representatives from all significant organization units to be affected by the plan; and to pretest the plan before making a final decision.

SOME USEFUL GUIDES

Up to this point consideration has been given to an analysis of the various factors which a planner might wish to consider at each stage of the over-all planning process. Mention was not made of several of the newer tools and techniques which are available to assist the planner in reaching an optimum solution. This was done for several reasons. First,

this is not a book on techniques of planning but rather planning theory. Second, the significance of tools and techniques are best understood after the theoretical framework has been established. Last, as a practical matter, several of the planning aids have application over several areas of the over-all planning process and are thus better understood when they are presented in summary fashion. Some of the more important tools and techniques will be viewed as they influence the planning process. Those who are interested in a detailed study of these techniques are encouraged to refer to the many books specifically designed for this purpose.

Some of the more important tools and the general area of significance appear in the table below.



The three general groupings of tools and techniques in the right-hand column are designed to show that:

1. By the use of economic measurements the planner is able to establish ". . . quantitative estimates of economic relationships . . ."[3] This is necessary because:

[2] *Top Management Decision* (New York: American Management Association, Inc., 1957), p. 38.

[3] Milton H. Spencer and Louis Siegelman, *Managerial Economics* (Homewood, Ill.: Richard D. Irwin, Inc., 1959), p. 50.

Management wants and needs to have essential relationships and predictions expressed in quantitative terms if it is to formulate plans involving the hiring of x number of workers, the scheduling of y units of production, or the marketing of z units of output. In other words, plans must generally be reduced to numerical terms if they are to guide the decision makers whose function it is to steer the firm's course into the future.[4]

2. With these economic relationships understood, the planner is then prepared to undertake a forecast of future conditions. This is desirable because:

> . . . virtually every business and economic decision rests upon some type of forecast of future conditions. Successful forecasting reduces the areas of uncertainty that surround decision making with respect to cost and profit budgeting, production and employment stabilization, inventory control, pricing, investment planning, and a host of other problems confronting business managers.[5]

3. Finally, the actual determination of a solution can be arrived at by use of one or a combination of two or more of the approaches listed under methods of attack.

The important point is that the modern planner has available to him many powerful tools to assist him in every phase of the planning process. To the extent that the more sophisticated tools are useful in general planning by a company, and to the extent they are used, there is a greater likelihood that:

the resulting plan will be superior
specialists will be used at various stages of the planning process
communication and coordination, at least initially, will be more difficult
the planning unit will be separated from the unit responsible for implementation
data collection and processing will become more formal and routinized
decision rules will be established for a number of basic plans.

[4] *Ibid.*, p. 50.
[5] *Ibid.*, p. 26.

5

THEORY OF DATA COLLECTION AND PROCESSING

IN CHAPTER 4 THE CHOICE-MAKING process was examined. It was shown, at least through implication, that frequently the collection and processing of data play a key role in the over-all planning process. Although this does not suggest that other parts of the planning process are unimportant, it does emphasize again that a successful plan can be no better than the information made available and the judgment exercised with this information. The sources of data and aids for data collection are innumerable. No particular purpose would be served by examining all of these sources and aids, since this book is not designed as a how-to-do-it book but rather as a guide to the development of a theory of planning. Thus, it will be sufficient for our purposes to examine some of the more formal and elaborate systems that are available for providing information to be used in formulating comprehensive, significant and rather long-range plans. It should be emphasized also that no attempt is made to train the reader to become competent in

the use of these aids and guides. After studying this chapter, the reader will not be equipped to conduct a forecast or market study or to prepare a budget. He should understand the significance of these tools and the particular role each plays in the planning process.

CONCEPT OF DATA COLLECTING AND PROCESSING

Data collection is concerned with the act of seeking out and acquiring all information that is of value in preparing a plan. The data may be in its original form, or it may have been processed into a finished report. Attention in this chapter is particularly concerned with the raw and semi-processed data. The various ways in which data may be acquired, the characteristics of each method, and the type of information usually obtained from each source are considered here.

There could be a technical argument as to when data collection ends and data processing begins. This point is not significant here. Processing, as used here, is arranging the data gathered in a form more useful than the form in which it was found originally. To avoid confusion, it should be noted that the same raw data may be used by various units within the organization for different purposes, and the specific way in which data is processed and presented may vary significantly. The approach to be taken is to concentrate on one plan at a time and the processing of data for that particular plan. The following simple example might help to clarify this point:

RAW DATA	COULD BE ARRANGED BY	COULD BE USED FOR
	Total time: yearly monthly weekly daily	
	Unit: total company division department section	Scheduling vacations Scheduling work hours Changing selection techniques Changing job assignments Induction training program Evaluating employees and managers Providing special services
Absenteeism Tardiness	*Personnel:* job class job title age length of service	
	Cause: illness weather transportation personal business	

Time period:
day of the week
day of the month
day of the year

Length of time per incident and total for each:
consecutive days
cycle recurrence

At one extreme, all of the data listed could be recorded each day and processed into a summary report which would be available to the director of the personnel department and all managers as well as top executives within the company. At the other extreme, assuming the same data is collected, all the information, except that needed for payroll purposes, may remain in its original form on each employee's personnel record card. The arranging of the material in a more useful form could be done by a member of the personnel department or by a representative of the line or staff department interested in all or certain parts of the accumulated data.

The concept processing data could be extended to include the interpretation of data beyond the normal exercise of judgment required to properly arrange raw data. In the example above, the proper assignment of causes of absenteeism or tardiness and length of time of tardiness may require the exercise of judgment. This is part of the requirement for arranging data in a useful way. A second stage of interpretation would include reference to the meaning of the data collected. Some tentative conclusions that could be drawn from the kind of information included in the above example are: as employees reach 55 and are at a certain level in the organization, absenteeism and tardiness reach their peak; tardiness occurs more frequently in the winter months and for reasons of transportation difficulty; and most absenteeism is caused by employees taking time off to attend to personal matters.

The most advanced form of processing would include a set of recommendations supported by the conclusions drawn. Recommendations could include the early retirement of certain classes of employees, the reassignment of certain personnel, and the provision of certain services—free or at a fee—such as medical check-ups, dental work, legal advice, shopping service and the like. In this case, the data collection and processing could be thought of as extending from the recording of the initial data to the final formal report presented to an executive for approval. Attention in this chapter is directed to the gathering of raw data and processing it to the point where it can be used as a basis for preparing recommendations.

HOW DATA MAY BE ACQUIRED

The choice of one or more means of acquiring data over other means is conditioned by, among other things, the type of information desired.

This, in turn, is influenced by the use to be made of the data collected. Since these three parts are interrelated in that each tends to influence the other, they are treated jointly within this section.

Records and reports

An all-inclusive definition is to be used here. All data, both within and outside of the company, which is in writing comes under this designation. This would include such diverse documents as minutes of meetings, letters, production schedules, books, magazines, and brochures. The material upon which the data is recorded could be paper, micro-film, brick, cement, wood, or metal. The key point is that the data is recorded in some form on some substance.

The type of information usually obtained from records can be conveniently viewed by considering the total scope of the information available. A convenient breakdown would be by company, industry and nation. Company records usually cover those items that are used to assist in routine decision-making, control and appraisal. Data regarding total industry activity may be comprehensive in nature but not sufficiently detailed in many areas to be very useful for planning purposes. It does provide a guide to broad trends, however, and can be used for general comparisons. Data concerning total trends in the economy and government action can be of considerable use in preparing comprehensive, significant, long-range plans.

The data collected from records and reports are used for a variety of purposes. Among the uses are included the preparation of the balance sheet, profit and loss statement, application of funds statement, break-even chart, and sales forecast.

Experimentation

Experimentation is probably the most advanced form of data collection, for, in a very real sense, it creates new information not yet available. In fact, one tends to rely on experimentation for data collection when other means are inadequate.

The type of information obtained from experimentation characteristically refers to new ways of doing things such as work methods, production and marketing processes, product and machine design and the like. The results of the experiment may then be used to prepare charts, drawings, or models to be used as a basis for making recommendations or preparing plans.

Observation

The introduction of this concept could provide unnecessary confusion since observation is frequently a part of experimentation. When used

separately, as is done here, it refers to a distinct way of gathering data. By viewing and recording the way in which something or someone performs, the researcher can acquire useful information not otherwise available.

This technique is widely used to determine how personnel, equipment and processes are performing. The results of these observations can be presented in the form of process flow charts, man-machine charts, and right-left hand charts, to name but a few.

Questioning

The last method to be discussed is called questioning because it consists of questions and answers as the means of acquiring data. It is one of the most common methods used at all levels of the organization.

The type of information frequently obtained by this method deals with attitudes and opinions such as consumer reaction to product style or distributors' concern about quantity discount rates or the company's advertising policy. It is also useful for acquiring confidential or personal data. The information collected is usually presented in report form.

The brief outline presented above is intended to give the reader a general understanding of the four major techniques used for gathering data and to suggest the general type of information that might be acquired by use of each technique. Table 5-1 contains a summary statement of the interrelationship of these units. With this general background, the reader can gain a better understanding of the characteristics of data gathering and processing.

CHARACTERISTICS OF DATA

The importance of data, their collection and processing and their role in the overall planning process can be best understood when the various characteristics of data are studied. They are examined here in the pure sense without specific consideration being given to the various methods used for collecting data. It may help the reader to better understand this section if he bears in mind that reference to data or the collecting of data should be thought of in terms of the needs of a plan. That is, when data is to be collected, it is done in light of its expected use. Thus, the need for certain information is determined by the use that will be made of the data.

All data have the following characteristics:

1. Complexity
2. Significance
3. Comprehensiveness

4. Length of time
5. Specificity
6. Completeness
7. Flexibility
8. Frequency
9. Confidential nature
10. Formality
11. Authorization
12. Accuracy
13. Ease of control

TABLE 5-1

SOURCES OF DATA AND THEIR USES

How Data May Be Acquired	*Type of Information Usually Obtained*	*Use of Information Collected: to prepare*
Records, reports and published data	Company, Competitors, Industry — Sales, Production, Inventory—Cost, Profit and loss — Quantity type	Gantt Chart Profit and loss statement Balance sheet Break-even chart Forecast
Experimentation and testing	New work methods New product designs	Man-machine chart Blueprint or drawing Specification sheets Model
Observation	Product flow Work methods	Production flow chart Man-machine chart Right-hand left-hand chart
Questioning	Employee, Customer, Vendor, Distributor, Stockholder — Attitude, Opinion, Knowledge Wage/salary rates	Market report Morale report Wage structure chart

Complexity

For a complete understanding of the concept of complexity, it is necessary to divide it into its many parts. It is also necessary that the proper perspective be taken as these subunits are examined. Complexity and all the other characteristics of data are viewed from the point of view of their impact on the activity of data gathering and data processing. Of course, these in turn are influenced by the use to be made of the data.

The complexity of data is influenced by the technical nature of the sub-

ject and its components, the total quantity of data to be collected, the divisibility of data into subunits, the guides available to help in collecting data and the number and variety of sources of data.

Technical nature of subject. A subject is technical to the extent specialized and advanced knowledge are required for a satisfactory understanding of the data covered. Increasingly, the information that is used for planning purposes in business requires both specialized and advanced knowledge at all stages of the planning process. Notice here that the emphasis is on planning and not performance.

An important distinction is to be made between the terms specialized and advanced. Specialized knowledge refers to a given type of knowledge that is not generally held and which requires specific training or experience for its attainment. Advanced knowledge refers to the level of training or experience required. An example would be the qualifications of a time study man and cost accountant. Each has a special job to perform, but the level of knowledge required of the cost accountant is probably greater than that of the time study man. Of course, there is also a significant range of knowledge within each specialty.

This distinction is important because it suggests what qualifications, in part, the researcher must have to successfully gather and interpret data from various sources. In another sense it might suggest the need for presenting data in different forms, for the purpose of ease of interpretation, at different stages of the planning process.

Total quantity of data to be gathered. Emphasis here is upon the size of the project without regard to the quality of data required. An example could be the setting up of sales territories and the determination of sales quotas. As the sales area expands from a few cities to a state and region, and as the sales force increases from few to many, the problem of data collection becomes more complex. Assume that as each unit increases, a point is reached where either additional data collectors are needed or more refined techniques of data gathering and processing will be adopted. The addition of personnel would complicate the problems of coordination and control. More refined techniques such as sampling rather than full coverage and the possible use of electronic data processing equipment in place of calculators and adding machines would make the process more complex.

Divisibility of data. The gathering of data becomes less complex when it can be logically divided into subunits so that the minimum amount of technical knowledge and experience is required for each. Whereas the total amount of knowledge and experience may not change, its dispersal among two or more researchers reduces the amount required of any one data gatherer. The time study example can be used to illustrate this point. Assume that the three major divisions of the study are the determination

of elemental time, normal time and allowance time. If a stop watch is used for the time study, the same person would likely determine the performance rating. There is no reason why he need determine the figure to be used for allowance time, especially when they include down-time for maintenance, fatigue and personal allowance time. If he is furnished this information-allowance time, the complexity of his task of determining standard time is significantly less than it would be if he had to determine for himself the various components of allowance time.

A more elaborate example which would cover more than one functional area might help to emphasize this point. A company engaged in jobbing work of short order nature for a variety of customers is usually faced with several major decisions daily, each requiring special information for an intelligent decision to be made. Several or all of the following decisions must be made: thorough product specifications, price schedule, production schedule, delivery date, raw material requirements, machine requirements and so on. Each of these could be thought of as a separate unit, although they are obviously interrelated. Were one person assigned the responsibility for collecting the necessary data for all of these areas and not by referring to specialized units within the organization, he would have a complex data gathering and processing problem. The assignment becomes simpler when it can be subdivided so that one person, perhaps the product engineer, can suggest the final design with parts list; another person, say, the purchasing agent, can provide cost, suggested ordering quantity and delivery dates for raw materials; and another person, say, the scheduler, can recommend delivery date.

Available guides. The more specific an assignment and the more precise the guides, the less complex the problem of data collecting and processing. The thought here is that the greater the reduction of choices or alternatives and the more precise the tools, the less complex the problem at the preparation stage as well as the gathering and processing stages.

Knowing what to look for and being able to tell when one has found it would appear to be two of the more important elements in data gathering. Assume that an employee has been assigned the task of preparing job descriptions and job specifications which will later be used for job evaluation and selection purposes. When the job analyst is given a form to follow with adequate definition of terms, he will find his task greatly simplified.

The market analyst interviewing a prospective customer regarding his attitude about the company's product or the psychologist interviewing an employee who is leaving the company may find it difficult to record his findings in a meaningful way even when guides are provided. The problem is difficult because some of the answers received tend to be contradictory, the reaction of the respondent may cause the interviewer to ques-

tion the accuracy or sincerity of the statement, or the answer may be ambiguous. When the interviewer has to pass independent judgment, his task becomes more complex.

There is one major danger of too many guides. Frequently, use of guides and standard ways of measuring results may cause the researcher to stop his analysis prematurely. This is particularly true when detailed questionnaires or interview forms are used.

Number, quality, and variety of sources. Probably the simplest way to gather data is to refer to one's own mental storehouse of knowledge—assuming, of course, that the knowledge is available in the form desired. Frequently, there are many sources of information and within each source a variety of alternative choices. To avoid confusion, this topic should be divided into two parts. One approach will consider the number of general sources such as interview results, records, and the like. The other will consider the number of individual units used for one or more sources. For example, the number of people to interview, the number of machines to observe, or the number of products to test.

In the first approach, the basic problem is one of selection of a major source. Whenever there are alternatives, there are usually variations in the quality of material that can be collected and the outlay of time, energy and money required for its collection. The problem becomes one of selecting the prime source.

The second approach has a twofold division. The proper sample must first be determined. As previously mentioned, this introduces an element of complexity which is not present when the whole universe is used. After the sample has been selected—say, 20 complete cycles for a time study, or five per cent of total production for quality control of items produced by fully automated equipment, or 15 per cent of employees for a morale survey, or 25 per cent of distributors for an opinion survey—the next step is to collect the information from those included in the sample.

When the researcher is given his assignment, he may find a sample with components that are fairly uniform in behavior, such as machines or products. Or, he may receive quite the opposite assignment in which elements of his sample are alike as a general group, such as employees, customers or distributors, but quite different as individuals. They have variations in sex, age, habits and attitudes, for example.

The entire data gathering process becomes more difficult as each element becomes independent of other elements. The complexity of data gathering and processing is a function of the technical nature of the subject, the total quantity of data to be gathered, the divisibility of the data, the availability of guides and rules, and the number, quality and variety of sources.

Significance

With the multiplicity of data available from a wide variety of sources and the constant demand placed on the researcher, considerable care must be exercised to insure that all vital information is obtained in proper form and in time for its effective use. The importance of data to be collected can be viewed in two ways. There is some information that may comprise a small part of the total quantity of information required for preparation of a plan, but it serves such a vital function in the success of the entire plan that it is given top priority. A second approach that can be used is to view the importance of the plan as well as the data. In this light, data of secondary importance to one plan could be more important than the strategic data required of a second plan. As a plan becomes more comprehensive and significant, there are a greater number of vital areas which demand complete and accurate data. On occasions the various parts of a plan are so interrelated that each is as important as the other.

Another useful way to conceive of the importance of data is to visualize the consequences that would result if the data were not available in the form desired. At least three possibilities exist. The preparation of the plan may be postponed indefinitely until the data are provided. The plan may be processed without the use of the data or substitute data. Or, as is frequently the case, substitute material may be used to allow for a satisfactory decision.

Postponement of plan. When an important plan must be postponed beyond a desired period of completion and implementation because of the lack of vital information, there can be little question of the importance assigned the needed data. Examples of this can be found in the delay in the acceptance by top managers of a new product style until an elaborate report on consumer attitude has been completed. Or, the decision to purchase automated equipment may be delayed until exhaustive tests have been made within the company's work environment. In executive selection such data as references, past experience and personal qualities may not be easily available in the form desired, and thus an intelligent decision cannot be made until information on all of these items is provided.

When the above conditions exist, the decision-maker must decide upon the relative importance of the data, the seriousness of the delay and the cost that would be required to get the data more quickly. In each of the preceding examples, more intensive effort could be expended to obtain the necessary information in minimum time. If the executive position opening resulted from the unexpected death of a key department head at a crucial time of the year, and the company's promotion policy is to hire top executives from the outside, and not to use acting department heads,

the company may be willing to undertake a crash program with the president taking an active role in the gathering of data as well as the final selection decision.

There are times, of course, when a plan must be postponed indefinitely because the desired information is not known and no accurate prediction can be made as to the likely date when it will be available. Much of the planning that is being done in the area of outer-space travel and nuclear power systems comes under this classification. Even here, of course, the decision can be made to undertake a crash program to speed up data gathering and processing time.

Increasingly, enlightened managers are discovering that the actions of various levels of government and their agencies—federal, state, and local—greatly influence the type of information which becomes important to a company. This extends from the actual granting of contracts to the passage of legislation that will affect operational decisions. Some of the vital areas of legislation are taxation, public improvements budgets, foreign aid, right-to-work, fair employment practices, and the defense budget. There does not appear to be very much the company planner can do to hasten legislation or changes in legislation. In contract negotiation they can act to reduce some of the delay.

Act without desired data. At the other end of the scale of importance is data which is desirable but not vital at the time, so that a satisfactory decision can be made when it is not available. The astute observer might suggest that the provision of information that is not necessary is wasteful in every respect and thus should not be considered in a discussion on significance of data. And this is an important point. The fact is that a great deal of data is required as a matter of record or to support claims made or inferences drawn by parties to an agreement. A decision can be reached and action taken to implement the plan while the data are being processed.

The checking of references, educational background and medical examinations for certain classes of workers might be carried on after hiring has been done because the interviewer with the use of psychological tests and depth interviewing was satisfied that his decision was sound. In cases of this kind, follow-up becomes important because frequently there is a tendency to allow records to remain incomplete once action has been taken. Whenever discrepancies exist between the information originally given and the information newly received, or when the new facts fail to support the conclusions drawn, the decision-makers must then determine the significance of these variations and decide upon a course of action.

Use of substitute data. If the desired data are not available when needed, it is often possible to use substitute information which may be

adequate, although not ideal. In some of the examples already used, we can see the possibility of their application with slight modification. The equipment purchaser might be willing to settle for exhaustive tests by the equipment manufacturer supported by case studies of several actual users of the equipment. This would be a substitute for extensive testing within the shop of the prospective purchaser.

Before agreeing on a new style, the decision-maker might prefer to have the result of an elaborate market survey covering a wide variety of consumers, but he may be willing to accept survey results limited to present or past company customers. He may even be willing to use survey results furnished by a trade association or trade publication. The chief executive might prefer to personally interview candidates but he may be willing to make his selection on the basis of information provided him by personnel or subordinate line executives.

In each case, there is a set of data most desired by the decision-maker, but there are also alternate sets which can provide adequate guidance. The decision as to which set will be used can be resolved by considering the relative advantage of the superior set of data and the relative cost, in delay, money and effort, of obtaining the desired set over the alternate set.

The importance of data is a function of the strategic role they play in a given plan, the importance of the plan, and the availability of substitute material.

Comprehensiveness

The reader is reminded that the frame of reference used in this chapter is the entire body of data needed for the proper preparation of a plan. Thus, when the comprehensiveness of data is discussed, it is examined from the point of view of the demands of one or more plans. In a general way, it can be said that data become comprehensive to the extent that two or more departments either provide information directly or simply serve as a source of data with personnel outside of the department collecting the information. A more specific and useful approach would separate data by kind or class or function rather than department, since the assignment of duties to various organizational units is not uniform. In addition, there is a set of data which is accumulated from sources outside of the company which would not be covered by the general definition of comprehensiveness.

The important point is, nonetheless, that whenever data become available from more than one unit within the organization, a number of problems may develop beyond those encountered when data are restricted to a single unit. Some of these possible problems are gaining authorization from responsible persons for gathering or receiving data, establishing a

cooperative relationship with operating personnel who supply the data or records and reports from which the data can be obtained, checking on the accuracy and completeness of the data, and providing some means of control over the continuous flow of data to make certain of its up-to-dateness.

Comprehensiveness is a function of the data itself and its natural division into subunits.

Length of time

Time as a characteristic of data gathering and processing can be conveniently subdivided into several major parts. There is the time element of normal time required for the completion of the function, the total time period covered by the data, the up-to-dateness of the material, and the total future period of time covered.

Time to gather and process data. There are some forms of information which are readily available in rather complete and orderly form. Perpetual inventory records of raw materials, parts and supplies are fairly common for manufacturing firms. Some firms extend the automatic inventory concept to finished products. A similar type of record may be maintained in the office of the purchasing agent and may include additions to inventory resulting from arrival of new goods as well as the movement of goods out of inventory. In a sense, this could be called continuous data gathering and processing since each transaction is recorded on the appropriate form in the designated place. The time required to gather the data for decision-making and planning purposes would be insignificant, although the sum of the time required for each recording would be fairly long. At the other extreme would be the situation where little control is exercised over record keeping and the data needed for purchasing decisions is obtained by actual physical count. The time required for gathering the data by actual count would be longer than in the first example, although the total time could be less than the accumulated daily times spent recording the data.

The length of time required is intimately tied in with both the nature of the data required and the logical methods of data collection. When subjective material is desired (employee attitudes or consumer opinion, for example), rather than purely objective data (production or sales records, for example), there is the likelihood that greater time will be required at one or more stages of the process. In the preparation of the questions to be asked, in the actual interview, and in the analysis of the material recorded, considerable judgment must be exercised to insure accuracy and completeness. Of course, there is usually an added delay element which might be called mechanical and physical. This would in-

clude printing of the questionnaire, mailing time to and from respondents, or travel time when personal interview is used. A similar problem exists when much of the needed data is not available from any existing source, thus requiring experimentation. The total time requirement must include the time needed to design the experiment and to design and/or procure the necessary apparatus for conducting the experiment, as well as the time needed for performing the experiment.

Some information takes considerable time to gather because of the total quantity of data required. Quite obviously, the total time required will be greater for gathering market information for three territories rather than for one proportionate in size to each of the three, for conducting five time studies rather than two, or for interviewing 50 persons rather than 25. As a matter of fact, one frequently finds that up to a point the above statement is true, but beyond this point a significant reduction in total time may occur at one or all stages of data collection and processing.

There are a number of reasons for this. As the universe grows larger, there is greater likelihood that statistical sampling techniques will be used, a larger force will be assigned (the sum of each individual's time will increase but the total lead time needed will be less), more efficient mechanical processing equipment will be used and more technically trained people will be used. These things do not happen automatically, but the opportunity and feasibility of their use increase as the total work assignment increases.

The time required to gather and process data is a function of the form in which the initial records are kept, the subjective nature of the material required, and the type of collection and processing techniques and equipment used. It is also influenced by the complexity, significance, comprehensiveness, and confidential nature of the information desired. These latter characteristics were not discussed here because they are discussed in greater detail in other sections of this chapter.

Time period covered by data. The length of time covered by a set of data can vary from fractions of a day to years, even decades. The same information may be presented in different time units for different purposes. A businessman operating a small business and purchasing goods on a hand-to-mouth basis may be interested in daily inventory records, sales records, and statement of cash receipts and disbursements. He may also wish monthly, semi-annual and yearly profit and loss statements and a balance sheet.

When consideration is given to changing major goals or policies, the time period is usually lengthened. Product diversification or simplification may serve as an example. Assume that a company manufactures a complete line of toys which range from small dolls to bicycles. Assume further

that a variety of material is used—rubber, polyethelene, wood, tin—across various classifications of toys and that a wide age, income and status group forms the market exploited by the company. The plan to be prepared is to include recommendations concerning the simplification of the product lines, raw materials used and market covered. For each major part of the overall plan, data will probably be gathered for several previous years with projections made for several or many years in advance.

When major decisions are to be made regarding plant expansion, purchase of expensive machinery and equipment, or hiring of a large number of employees, the same type of condition prevails as illustrated above. Particular attention will be given to current and future trends because additions are being emphasized rather than just replacements.

Up-to-dateness of material. It appears that one of the greatest problems facing the planner is obtaining data in a proper form while it is still useful. Information that is not up-to-date and is not used deprives the company of much of its needed flexibility. The same information, when used, may frequently cause harm, especially when the planner does not realize that he is using old information, because decisions may be wrong in light of the current conditions.

There are many reasons why information may not be available when needed. Probably the greatest obstacle is the delay which results from the acts of data collection and processing and in some cases official publication. When information is collected by interview or experimentation, the total elapsed time from the start of the program to the time the information is ready to be used for decision-making purposes may be measured in months. Conditions influencing the quality of the data may have changed significantly. It is well known, for example, that the level of expected expenditures for shopping goods by the average consumer is influenced by his present level of income and savings, his level of past expenditures, and his expected income for the next year. The expenditure plans of the consumer may change overnight as a result of possible job loss, layoff, or reduction in hours of work.

The information given in an interview regarding style preference or the experimentation done in a laboratory concerning a raw material, product, or package design are usually related in some general way to current practices and conditions and expectations concerning future developments. A change in conditions used as a base of reference may make obsolete a day-old opinion or year-long experiment. For example, a consumer having a 15-year-old kitchen appliance may plan to replace it with a new but similar appliance. When asked about her preference among five or all current styles, her base of reference is no greater than the existing number of models. When she makes her actual decision to buy, her choice may be none of the above, or at least not her first or second choice. The

reason could be that a radical new mechanical or body design was introduced between the time of the opinion survey and her decision to buy. In the case of a fairly long, complex experiment, the introduction of a new raw material, new machine design or product design by one or more competitors may make the data collected somewhat less useful.

When information is obtained from published sources, it is usually less up-to-date than when gathered from the original source. The scope of the project or the cost of obtaining the data may be so great that no reasonable alternative may be available. Much of the information published by the federal government, trade associations and business magazines would come under this classification.

The up-to-dateness of material is a function of the information to be collected, the tools used in data gathering and processing, the form in which records are kept, and the environmental influences which affect the data.

Look into the future. In the dynamic domestic and world economy in which most businessmen operate, future expectations play a prominent role. Of course, the time period can range from one day to a decade or more. Most managers find it useful to use information extending over many different units of time. Expected sales over a one- or two-week period may be of great significance, especially around seasonal peaks or holidays. Anticipated market conditions for several months may be required for planning manpower, raw material and machine utilization. As one goes beyond a year, the information becomes useful for machine or equipment replacement, plant expansion, major product changes and other significant decisions and plans.

Looking into the future is a key concept when properly used because the projection of significant data years into the future can suggest areas in which plans should be prepared. Rather than have an assigned plan provide the stimulus for data gathering, the careful scrutiny of significant projections can indicate the wisdom of preparing new plans or modifying existing ones.

The future time period one may wish to examine is a function of the specific use to be made of the data collected and the importance of variations in future conditions upon the company.

The over-all characteristic called length of time was found to be a function of the time required to gather and process data, the time period covered by data, the up-to-dateness of material and how far into the future projections are made.

Specificity

In a general sense, the more specific the information used, the greater its value. This is particularly true when specificity is thought of as a rela-

tive concept so that the data may be specific enough when used for one purpose but too general when used for other purposes. An example may help. Assume that a company is selling door-to-door within a three-state area. If it wishes to determine the potential sales of the total territory for scheduling of purchasing and production, it may simply measure the total market potential by time periods. However, if the company wishes to set up sales territories, it will need to break down the sales figures by state, city and blocks—including maps indicating the concentration of population, distances between likely customers, transportation facilities and the like.

The difficulty of getting specific data is closely tied in with the type of information required and the methods used to acquire the information. When dealing with ideas and concepts in the abstract it becomes difficult for the respondent to reply in specific terms. Questions relating to consumer attitude toward quality of a product, its price or its design are often answered in a general way such as the price is too high, the quality is not too good and the design has good and bad points. The properly prepared questionnaire and the astute researcher can reduce this general type of response by asking for specific indications of poor quality or poor design. Nonetheless, the final answer frequently lacks sufficient specificity simply because the respondent does not wish or honestly cannot give the amount and kind of specific information desired.

When information can be or is obtained from published sources, the researcher frequently finds the data of limited use because it is presented in rather general terms. Even when authors think that they are being extremely specific, the reader may find the information too general for use because he sees it from a different perspective and does not have the same mental reference to use as the writers.

Even internal records and reports frequently suffer from the lack of specificity. This problem becomes particularly acute, unless care is exercised, when the person preparing the report and the person using the report for decision-making are not the same. Information contained in job descriptions and job specifications may refer to general levels of education, experience and skill. Interview results and completed application sheets may fail to indicate the specific qualifications of the candidate, his interests or potentialities. Substantiation statements used for job evaluation, pay increase and promotions frequently fail to give specific justification for ratings given.

The further one looks into the future, the more difficult it becomes to provide specific information. It should be noted that some long-range plans do not require the same degree of specificity as do short-range plans. When specificity is desired and not available, one answer to the problem could be the use of flexible plans.

The degree of specificity desired is primarily influenced by the use to be made of the information. The specificity actually provided is a function of the data itself, the skill and care of the researcher, the techniques used, and the adequacy of sources used.

Completeness

The information provided may be sufficiently specific, but it may be incomplete. Reference is not made to inaccuracy in the sense that errors exist within the data provided. There are two ways to look at this problem. One is to consider the entire omission of a major part. The other is to consider the lack of completeness of one or more parts of the data provided.

There are three broad reasons why incomplete data may be provided. They are the nature of the data, the qualifications of the researchers and limitations of time and money.

Nature of the data. Information may simply not be available in the form desired. Much of the desired information regarding future actions of competitors and various levels of government within the United States and abroad would fall within this category. Actions of other groups which may be difficult to anticipate in full are unions, non-union employees, distributors, suppliers and stockholders.

Qualifications of researcher. This covers a wide range, for it includes attitudes and motivation as well as technical competence. Indifference could lead to unsatisfactory reporting and processing of desired information. An incompetent researcher, especially when complex techniques are used, can fail at several stages. The original sample, when used, can be inadequate; the questionnaire may be incomplete; the interviewing technique used to get answers may be faulty, or the information gathered may not be fully processed.

Limitations of time and money. Obtaining adequate information is often a time-consuming and highly expensive venture. When information is needed sooner than it can be gathered, even under a crash program, some compromise may have to be made. Frequently this takes the form of settling for whatever information can be obtained.

There will be times when a decision-maker or planner will not wish to pay the price required for getting the desired data. When this decision has been made, it should mean that the advantage lost in not having the information is less than the price required for making it available. This is the best situation. A less desirable condition would exist if the decision-maker did not know of the incompleteness of the data and acted as though all the desired data were available.

In summary, the level of completeness is a function of the nature of the

data, the qualifications of the researcher and the limitations of time and money.

Flexibility

Flexibility is thought of in terms of the various uses that might be made of data as it appears in its original form and after it has been processed into a final report. The range of flexibility could extend from the very narrowest specialized use to a broad, general use across several departments or functional areas. A slight modification in the manner in which the raw data is processed and presented could give it multiple uses. The flexibility of data is conditioned by its nature and use; what is flexible for one company may not be flexible for another.

Much of the information that is collected in conducting a job analysis and in preparing job descriptions and job specifications can be used (along with other information) with slight modification, if any, for selection, promotion, setting base rates and ranges, salary increases, training, organization assignments and work assignments. Profit and loss statements can be used to gauge the total operational success of the firm. By extracting certain items such as selling expense and administrative and general expense and comparing each to total expense and net sales, the marketing department head as well as other top officials can draw useful conclusions. This type of information is particularly useful when several years are used for comparative purposes. The week-to-week trend in sales by product line and by size, style, and color is useful for scheduling production, allocating manpower, purchasing materials and parts and revising advertising budgets and programs.

Flexibility of technique. The information which is collected may not be flexible, but the technique used may allow for the collection of a fairly large variety of information without proportionate increase in time, effort or cost. The use of the interview is a good example. A psychologist conducting an internal survey designed to determine the level of employee morale may easily expand his inquiry into other areas. The astute observer could learn much about the basic qualifications and success of the respondent both on and off the job. The persons conducting the initial employment interview, the exit interview, and the performance review interview could cover either a very narrow range of subjects or a very large range. The same is true for non-employee interviews. The subject matter could include one or more of the customary areas of product and package style, price, advertising, channel of distribution and service. The decision in each case should be made on an economic basis. Does the extra expense justify the extra value received?

The flexibility of raw and processed data is naturally a function of the

nature of the data, the possible uses the company has for the data, and the form in which it is presented.

Frequency

A convenient way to view the characteristic frequency is to separate the natural frequency in which the data becomes available from the normal frequency of use.

Natural frequency. There are a large number of items which follow a fairly consistent pattern on the average, even though wide fluctuations may occur at various periods. In semi-standard and standard manufacturing, each scheduled unit of output follows a rather consistent time pattern. In the sale of convenience goods, a somewhat similar pattern is followed. In either case, the data (units of production or sales) become available on a fairly continuous basis. Other examples would include the areas of goods purchased and received, inventory additions and subtractions, personnel additions and subtractions, tardiness and absenteeism of employees, and the like.

Useful information may become available in a fairly inconsistent time pattern. The contemplated introduction of a new product by a company or the actual introduction of a new product by a competitor may generate the need for measuring consumer acceptance. There are other items of information which would fall between the two limits. Such things as changed work methods, variations in time standards, purchase of new machinery and equipment, and re-evaluating jobs would fall within this category.

Of course, there is some information which could be classified as once in a lifetime, or where the frequency of occurrence is so limited that most of the information required has to be obtained fairly close to the time use is to be made of the information. Examples of decisions and plans which would call for this kind of information include major expansion of facilities or movement of facilities to another location within the country.

Use frequency. Much of the information that becomes available on an hourly basis may not be used until it has been accumulated on a weekly or monthly basis. The same information, of course, as indicated under the discussion of flexibility, may be used for different purposes, thus requiring different time intervals.

Units of production and sales may be recorded daily but may not be compiled into a formal report except on a weekly or monthly basis. Records of absenteeism and tardiness may be recorded daily and a summary weekly report sent to payroll for payroll deductions. Once a year an official report may be made in which the total absenteeism and tardiness

may be broken down by individual, section, department and division. The frequency with which data become available and are processed is a function of the nature of the information and the use to be made of the data.

Confidential nature

One of the most important qualities of the confidential characteristic is its relative nature. What is confidential at one time may soon be nonconfidential. There will be a large body of information that will remain confidential because of its nature. There are three major breakdowns that are useful. The first includes the area of competitive advantage resulting from a new product or production process. The second has to do with the personal nature of the data such as a medical report. The third covers items which provide the decision-makers and planners with a degree of flexibility and greater objectivity they might not otherwise possess.

Competitive advantage. This area has been covered quite extensively in Chapter 2, "Dimensions of a Plan." Since a plan is more or less confidential because of the data used, much that was said there is appropriate here. Some of the more important items are new raw material, product and package and equipment design, new production techniques and machine layout, and new distributors and channels of distribution. When a company operates in a highly dynamic business environment, much of its advantage may lie in keeping its strategy secret. When a large number of items within the company fall under the classified category, the entire work complement may be dedicated to secrecy. This has been fairly common in government installations and within companies handling government contracts. Here the competitor may be thought of as a foreign power. The same type of safeguards are used by companies engaged in pure civilian work. An attitude of mind must be developed as well as a strict control system.

The use of the interview technique, oral or by written questionnaire, is probably the most difficult to control since the questions themselves will usually contain some reference to confidential data, the answers may be highly confidential, and the respondent may feel free to speak freely to others of his experience. When a major experiment is undertaken, there are several possible points of leakage of information. The persons who designed the experiments, the suppliers who furnish the apparatus and raw materials, and the specialists engaged in the experiments may all inadvertently or deliberately disclose valuable information to unauthorized persons.

Personal nature of the data. Much of the information received from employees and clients is classified as confidential and personal because it

is peculiar to the individual giving the information. Knowledge of the information by persons other than authorized persons would cause considerable embarrassment and could result in low morale or loss of good will. Within a typical manufacturing or merchandising company, there are many areas in which such information may be received. The application blank, the performance review records, and individual salary schedules are a few that might affect every employee. Credit information on customers and suppliers and a list of accounts receivable with the record of bad debts are two items which may adversely affect the business reputation of distributors and customers.

There are some fields of business—law, medicine, and insurance, for example—where most of the information received is given with the understanding that it is highly classified. The unauthorized disclosure of any significant part of this information could result in a lawsuit.

Managerial flexibility. This category includes some of the areas already covered but it embraces other areas in addition. An executive may wish to keep information confidential because its premature disclosure would seriously complicate the problem being studied. The situation becomes particularly significant when the data are to be used to help decide whether or not to do something rather than how something might best be done. Such areas as relocating a facility, introducing a fully automated production or assembly line, merging with a competitor, eliminating one or more product lines would fall within this classification. In each case, the company may decide not to change its current practices. Were certain employees to pick up some pieces of information at the beginning of the investigation by overhearing a conversation or reading the title of a table or chart, a chain reaction could easily set in. Within 24 hours, rumors could have the company pulling out within a week, leaving all present employees without work.

There are other items of information used more frequently which, while not as serious as those above, are important. Examples would include information relating to new time study techniques, job evaluation methods, work methods, salary increases and promotions. In all of these cases, including the more significant ones discussed above, the situation becomes serious because the information transferred from person to person is usually distorted and because the executives are usually not prepared to meet the various claims that may be put before them. In addition, the disclosure of the information may unjustly reduce employees' faith in the integrity of top executives.

Confidential data, as it relates to competitive advantage, personal nature of the data and managerial flexibility is a function of the nature of the data, the use to be made of the data, and time.

Formality

It is useful to view the characteristic of formality from the point of view of the techniques used for gathering and processing the data and the finished form in which it is presented to the decision-maker. A second general approach to the study of formality could include the formal arrangements—including the granting of authority—required at all stages. This approach is covered under the characteristic of authorization.

Technique used. Data may be gathered by the simple process of having someone relate his experiences or by casually observing an event. Or, an elaborate experiment may be designed or questionnaire prepared. The entire process can become a major project within itself with a separate budget and manpower assigned. Such advanced techniques of data gathering as market surveys, forecasting and budgeting may be used while electronic data processing equipment may then process the data received.

Form in which processed data is presented. The form in which the processed data appear may range from a simple statement of findings to the more elaborate statements such as comparative balance sheets and profit and loss statements, break-even charts, application of funds statements, blueprints of parts, and three-dimensional models of plant layout.

It has been indicated that formality is related to the techniques used for gathering and processing data and the form in which the final report is prepared. The level of formality is a function of the nature of the material, its significance, complexity and comprehensiveness, the time available, the period of time covered, and the level in the organization where the information will be used.

Authorization

To the extent that the information desired is confidential, significant and comprehensive, the problem of gathering the data is complicated. Likewise, the more complex and expensive the equipment used to help process the data, the greater the difficulty of obtaining the use of the equipment. These considerations are discussed under the characteristic of authorization.

When the collection of data is to be done by use of an elaborate experiment or comprehensive market survey, it is usually necessary to get official authorization before work is begun. When the data to be collected are comprehensive and significant, it is quite likely that several or all top level executives participated, if only in an advisory way, in the discussions leading to the approval of the study.

Even where executives have participated in previous discussions, they are frequently informed whenever the researcher wishes to collect data

from subordinates within their departments. When he leaves, the researcher may discuss his findings with the department head to give the executive an opportunity to correct any misstatements and to supplement the findings. After the information is processed and certain tentative conclusions drawn, it is customary to submit it to the executive for his comments before it is submitted to a higher executive as an official report.

When the information is of a confidential nature, as previously described in this chapter, a list of authorized personnel may be prepared and perhaps identification cards given to indicate those permitted to view and use the data. There are usually certain levels of executives within an organization who have an understood freedom of action and inquiry.

Each unit within an organization has information which it considers confidential. For outsiders to view and use this information, and this may hold true for executives at a higher level, it is usually necessary to obtain authorization from the responsible executive.

The discussion to this point has been centered on problems relating to internal factors. Much of the data desired may be obtainable only from outside sources. Examples are prevailing personnel practices in the community, or attitudes of housewives about one's product or company. The interviewer may have to present his credentials in order to get the necessary cooperation.

The authorization required is a function of the significance, comprehensiveness and confidential nature of the data. Authorization can be granted by official approval at the time it is needed, by procedure and policy established specifically for the project, or as a standard rule.

Accuracy

There are several characteristics which have been considered already —completeness, specificity and length of time, in particular—which influence the total accuracy of data. There is a distinct unit, however, which has not been covered and which will be assigned to the characteristic of accuracy. There are four parts to this problem in the context of data gathering and processing. The information itself may be incorrect in the original form in which it is given, it may be improperly recorded or interpreted, it may not be representative of the total universe, or it may be inadequately processed because of errors in the equipment or technique used. Since the ease or difficulty of verification applies to each of these, each is treated separately as a distinct problem within itself.

Incorrect information. The information obtained from all sources and by all means is always subject to error. When information is obtained by the observation method, there is the danger that the person or thing being observed is not acting in its customary way. The individual may pur-

posely change his work habits. When asked a question, a respondent may deliberately or inadvertently give false or misleading information. When experimentation is used, there is the danger that the design of the experiment is incorrect and thus the information obtained is in error.

Improperly interpreted. In all of the cases above, an additional error could come in because the researcher misinterprets the information given, which may be correct, or makes errors in its recording. The preparation of job descriptions and job specifications, the making of a forecast, the obtaining of comparative data from a variety of possible suppliers to be used in the selection of one or two suppliers, the preparations of specifications for a new building or machine all are examples of areas in which errors in judgment could be made.

Not representative. Whenever samples are used, there is the danger that the information collected will not be truly representative of the universe and thus it may be inaccurate for decision-making purposes. The use of sampling techniques in industry is much broader than most people realize, and there are strong indications that it is rapidly spreading. Examples could include quality checks of incoming materials and supplies, goods produced and items in inventory; checking of a limited number of references of job applicants; selecting companies for studies of comparative salary practices in the community; determining the number of cycles to be used in a time study for setting work standards; selecting consumers for a test of their attitude toward company products and services; requesting selected consulting firms to bid on contracts, and the designation of certain prospective suppliers to be considered as possible suppliers.

In each of the above-mentioned cases, the error becomes particularly important when the planner who uses the results of the study believes that the information is representative. That is, he believes that the average worker performs at the level shown, that the typical consumer shares the opinions presented, or that the going wage rate is the one given.

Inaccurate processing. There is always the question of how far forward data processing extends from the collection of data before it is called decision-making or planning tools. For example, how does one classify the break-even chart, the balance sheet and profit and loss statement or a departmental budget? An attempt will not be made at this time to draw a sharp distinction. The point to emphasize is that the data can be correct at the stage where they are initially recorded by the researcher from whatever source he may have used. Much of the information at this stage has to be further processed to be of real value. Probably the best example of this need would be when a large amount of the information covering a wide variety of topics is obtained from a fairly large number of respondents. The researcher may have 1000 replies each covering six

pages. For this information to be completely useful, it will have to be organized and interpreted. Note that the assumption was made that at this raw data stage the information is correct. The problem here is to maintain this accuracy through the further processing of the data into the final reports which may include conclusions or recommendations. Error could occur in the simple mechanics of assembling various views into different classifications. The major problem is related to the use of judgment in establishing various classifications and in interpreting the significance of findings.

In the area of forecasting sales, considerable judgment must be exercised in a variety of areas where the element of uncertainty is high. When the anticipated action of consumers, government officials, competitors and other businessmen must be taken into consideration, the task is indeed formidable. But this is just the first step. It now becomes necessary to integrate these various trends into a meaningful whole resulting in a rather precise estimate of sales for the next year.

The degree of accuracy maintained at all stages of the planning process is a function of the nature of the data, the form in which they are presented, the technique used at all states, the use to be made of the data and the qualifications of the researcher.

Ease of verification. In the analysis thus far, consideration was given to the various areas and ways in which inaccuracy might occur. Attention can now be directed to the ease of verification of the conclusions drawn from the data. Inaccuracy may result from the use of incorrect data or faulty techniques used for collecting and processing the data.

Incorrect data. It is assumed that a careful choice has been made of specific sources of information. For example, the records and reports that are used are those which have proved to be reliable in the past, and the persons selected for observation and interviewing have been carefully screened where practicable. When consultants are used, it is assumed that they are carefully chosen.

A considerable amount of the information used for decision-making purposes can be fairly easily verified in advance of use, although it may frequently prove rather costly. The information given on application blanks and during an interview by job applicants can usually be checked by writing to educational institutions, previous employers and references. Other facts can be validated by using psychological, trade and medical tests.

Much of the information relating to sales, production, quality control, and cost can be checked by inspection. The need for such checks may be suggested because most companies use some standard as guides and estimates of future expectations. There are production and quality standards and sales and production budgets. Significant variations of reported

performance from expected results may call for a check of the reported information. Implied in what has been said here is the further opportunity of verifying data due to the interrelationship of much of the information used. Reported sales, production, and inventory levels are consistently related. Goods purchased and received, production and inventory records should be in harmony. An applicant's total rating at the time he is hired, his test score, interview opinion and the like, his subsequent rating by superiors, along with his specific job assignment as presented in his position description, and actual measures of performance (units produced, goods sold, for example) should show a logical relationship.

There are other areas where it becomes more difficult to check the accuracy of information. The choice of suppliers and distributors is made difficult because much of the information furnished may come from the interested parties and be a matter of company records not generally available to the public. Even when samples are given of quality of production, there may be a question of the consistent production habits of the company. A check of other users of the supplier could help to validate the claims of the prospective supplier. When an important contract is pending, the company may wish to send representatives to visit the plant and to discuss with management representatives the various significant subjects of concern.

Faulty techniques. Whenever sampling techniques are used—and it has been suggested previously that they are being used increasingly in industry—a major problem exists in getting the proper number of items in the sample. In most areas, statistical techniques are sufficiently advanced that a trained specialist can accurately determine the proper sample and set guides to be used to check on the adequacy of the sample. Under these conditions, the problem centers around the qualifications of the researcher.

There are other areas where the difficulty increases because trained technicians are less likely to be used. A list of a few would include the number of job references to check concerning candidates, superiors to be asked to give performance reviews of a single subordinate, and other manufacturers to give recommendations concerning suppliers and distributors being considered. There is always a limit beyond which the company will not go because of the pressure of time or cost. The question is how many should be checked to insure that adequate information is available for an intelligent decision. The rule of thumb appears to be to use a limited number to begin with and to expand the inquiry if significant variation appears in the response or if one or more important items receive negative answers. Newer developments in the area of sequential decision-making are of considerable use here.

The ease of verification is a function of the information used and the tools and techniques available for measuring accuracy.

Ease of control

Control as a characteristic is used to indicate the ease or difficulty of observing and reporting significant changes in data as they occur. This element is particularly important when the data are used to formulate comprehensive, significant and complex plans. As this section is read, it should be borne in mind that the information in its processed form is often furnished to decision-makers who rely upon the researchers to furnish up-to-date information. The decision-maker and planner may not be in a position to judge the correctness of the data or their up-to-dateness. Thus, the responsibility falls upon the shoulders of the researcher.

The assumption will be made here that the personnel responsible for all phases of planning are competent and careful. Therefore, significant changes in information may not be reported in time because of the nature of the data, their availability or the time lag in gathering and processing the material. As noted previously, much of the information that is available in published form is made available only on a monthly or yearly basis. This delay could cause serious problems if significant changes occur in the interim period. The use of market research techniques are expensive in time and money. When they are used to measure attitudes and opinions which may vary within short periods of time, it may be difficult to get approval to measure these changes because of reluctance to support the additional study. It should be noted that many market researchers advocate continuous market research rather than an occasional (usually yearly or longer) study.

There are other items of information which may be recorded almost immediately upon occurrence. Some of these items could be processed without serious delay and made available to the planner in time for effective action. Records of units of production, quality of production, especially where statistical quality control is used, inventory level of all items from raw material to finished products, orders received and deliveries made, are a few examples. In these cases, the problem is basically one of adequate record keeping and comparison between actual and expected.

Another group of items is fairly similar to these but sufficiently different to warrant separate attention. In fact, some of these items with slight modification in a company's work environment, could be classified in the preceding group. A large number of decisions which are made fairly frequently rely upon information which one assumes to be fairly stable over time. Difficulty may develop when small changes over time result in a total significant change which may not be apparent to the decision-maker. One example of this is change in work habits, particularly in office jobs, which may affect total production of a unit, the quality of work done and the job-evaluated worth of the assignment. When opportunity

exists for this type of change, it can be corrected in part by frequent checks by specialists, say, job analysts, or by close observation and reporting by unit supervisors.

It should be repeated that emphasis in this section is upon the ease of discovering and reporting significant change. It is independent of the specific place within the planning cycle where the change occurs. As the researcher completes a major forecast, he may detect significant changes taking place in the economy which were not apparent at the start of the study. After a plan has been put into operation, certain basic premises which were used to support the decision may have changed, and this new information should be reported to responsible persons.

The ease of control is a functon of the data, the stability of the environment influencing the data and from which the data are obtained, and the customary techniques used to obtain the information.

INTEGRATION OF CHARACTERISTICS

Up to this point, each characteristic has been treated separately, although at various times the interrelationship of one with another has been illustrated. At the end of the discussion of each characteristic, it was shown that each is a function of certain activities and conditions within and outside of the enterprise. We will now examine the influence of selected characteristics upon the actual gathering and processing of data.

The greater the complexity of data,,data gathering and processing, the greater the likelihood that the planner will find it advantageous to:

use more sophisticated tools for data gathering and processing
use specialists for data gathering and processing
thoroughly check the accuracy and completeness of the raw and processed data.

The greater the significance of data, data gathering and processing, the greater the likelihood that the planner will find it advantageous to:

expend greater effort, time and resources in data collection and processing
use experienced researchers
use sophisticated tools of data gathering and processing
pretest the data before their use in planning.

The greater the comprehensiveness of data gathering and processing, the greater the likelihood that the planner will find it advantageous to:

arrange for easy access of researchers to the raw or processed data
use a team approach to the gathering of data
include representatives on the team from each major organizational unit

check the data for uniformity, completeness and accuracy

provide for an automatic flow of similar data should significant change occur before the plan is prepared and implemented.

The various characteristics can be integrated now with emphasis being given to their interrelationship. There are a great variety of combinations possible. Only a few are presented here. These expressions can be viewed as statements of general principles of data gathering and data processing.

The greater the complexity, significance, and comprehensiveness, the greater the likelihood that the planner will find it advantageous to: use specialists for data collection and processing; use consultants; use sophisticated tools and techniques; use a committee at one or more stages of the process; thoroughly check the accuracy, completeness and uniformity of the data, and follow a rather formal approach in the over-all process.

The greater the significance, completeness, flexibility, and frequency of use, the greater the likelihood that the planner will find it advantageous to: routinize or recommend routinization of the recording, collection and processing of data; mechanize or recommend mechanization of the recording, collection and processing of data; and provide for an automatic flow of data from source to planner.

The greater the confidential nature, infrequency of use, and significance, the greater the likelihood that the planner will find it advantageous to: secure official authorization for the gathering and processing of data; use a specialist or personal representative of a top executive; and exercise strict control over the entire process.

6

THEORY OF TESTING

IN THE CHAPTERS 3, 4, AND 5, general reference was made to the role of testing in planning. It remains for us now to bring together some of these ideas already expressed and to add to them other ideas to help formulate some useful conclusions relating to the role of testing in planning.

RELATIONSHIP OF TESTING TO PLANNING

A good argument could be made for the general applicability of testing to all phases of the planning procedure. This would extend from testing the ideas which suggest the possible need for a plan through all steps, ending with the test applied on the final plan by the approving agent. Another approach is to recognize the all-pervasiveness of testing but to give emphasis to the phases of the planning procedure where testing plays a significant role.

We have attempted to follow both approaches. We do this by first considering testing as a con-

cept without regard to its influence on any one step in the planning procedure. We satisfy the second approach by using illustrations and references which highlight the steps in the planning procedure where testing is of vital importance.

THINGS TO BE TESTED

The particular item to be tested at a given time is conditioned by many factors, as will be shown shortly. Nonetheless, a threefold grouping can be made of general items to be tested.

Data

The most logical place to begin our discussion is with the basic information used for evaluating the need for formulating a plan. The two measures which are important are the accuracy of the information and its completeness. Frequently, market information regarding the level of sales and the reasons for an increase or decrease beyond expectations serves as a stimulus to the marketing executive to think in terms of possibly revising an existing plan. Note some of the areas in which the data presented may be incomplete or inaccurate. A total sales figure may have been given without sufficient breakdown by size of individual order, cash versus credit sales, returns and allowances given or trend in sales over a period of time. The accuracy might be questioned because all orders taken may be classified as sales, or a single order to be delivered over several months may be recorded as sales within the month the contract is negotiated.

Data interpretation—conclusions from raw and semi-processed data

The raw data may be accurate and complete, but the interpretation of the data or the conclusions drawn may be inaccurate. Several examples come readily to mind. Three executives viewing the same market research report may arrive at three widely differing conclusions as to the interpretation to be placed on the findings. Or, several executives evaluating candidates for promotion may select different candidates even though they are all furnished the same record of experience, training and education of each applicant.

Plans prepared as a result of conclusions drawn

For purposes of illustration, we may assume that the need for a plan has been accurately determined and a workable objective has been established. The testing that would then be in order relates to plans and components of plans. The tests that would be applied are designed to measure

the appropriateness, structural soundness and saleability of the plan. The appropriateness of the plan would be related to the objective of the plan. For example, if the plan were designed to correct a decline in sales, its appropriateness would be related to such considerations as product style, advertising pitch or sales training, depending upon the specific objective of the plan.

The structural soundness can be thought of in an engineering sense. If it is determined that plans for a new building are appropriate as to size, layout and location, it might also be desirable to test such things as strength of supports relative to roof load to be carried. The time study technique used to set work standards or the job evaluation system to be used for assigning values to jobs may be tested for soundness.

The saleability factor relates to the method or way in which the proposal and/or finished plan is prepared to insure acceptance by the approving agency and to obtain ease of implementation. A proposal or plan which would require a department or company to embark upon a radically different plan may have to be tested for its saleability. A proposal requesting authorization to explore the feasibility of entering a new market or introducing a new product may have to be sold to the approving agent. Similarly, a plan for the removal of a plant to another section of the country may have to provide a subplan specifically designed to sell the employees and community on the reasonableness and desirability of the move.

MEANS OF TESTING

Logic and pure reasoning

When an executive is faced with the problem of passing judgment on a plan, almost inevitably he will test out some part of the plan by reference to pure logic. Each executive at a given period of time will have a certain capacity to exercise judgment. This capacity to judge will have been influenced over the years by training, education and experience and is thus peculiar or unique to a given executive.

Another way of looking at the problem is the nonpersonal approach. Some plans or components, by their very nature, regardless of the qualifications of the executive who will pass judgment, require the use of pure logic.

Reference to known theories and principles

Frequently, components of plans can be tested by reference to existing theories and principles. For example, the proper sample to be used

for statistical quality control or a market survey can be accurately tested by established principles of sampling.

Intuition

At times the experienced executive may simply rely upon his natural instincts to guide him in the preparation of a plan or in passing judgment on the soundness of a proposed plan. He may find it difficult to prove his point to others and thus to a large extent must rely upon his past success and present position and esteem for gaining acceptance of his views. Intuition tends to weigh heavily in the area of style innovation, from Dior dresses to compact cars. This is not to imply, of course, that other techniques of testing will not be used in these areas. Rather, it is to suggest that after all other tests are conducted, the balance (acceptance or rejection) may rest upon the intuitive judgment of the approving executive.

Model—scale and life size

It is often desirable and practical to test out a plan or its components by building a model which exactly represents or simulates the item to be tested. In new product testing, one or several units may be produced and subjected to a variety of tests. On occasions, the model may progress from a simple wood or clay mockup to the final product in the form in which it will be produced and marketed. Models may take the form of mathematical equations in which it is assumed that the real world, as far as is possible, is accurately represented in the mathematical model. In this case the model is tested for accuracy as well as the soundness of the recommended course of action.

Field test

In a sense, the concept of field test is an extension of the model as a device for testing. It is sufficiently important and different, however, to warrant separate attention. A field test, in its most sophisticated form, assumes the plan or its components are in final form and that the purpose of the test is to see how it is likely to work in real life. A new job evaluation system or incentive system may appear to be technically accurate, but it may be advisable to introduce the plans on a tentative basis for a month or two until experience in the use of these plans has demonstrated that they are acceptable. New production techniques, procedures and even machines may likewise be tested "on the firing line" before final approval is given.

TESTING PROCEDURE

If testing is thought of in terms of an integral part of all significant and complex plans, there is no need to go through a detailed description of a recommended testing procedure. Rather, it is recommended that the same suggested procedure outlined for planning in general be applied to test plans. This would extend from the determination of the need for a test through all the steps until final approval is given to the test results. It is not difficult to visualize how this would take place in weapons testing, say intercontinental ballistic missiles, or in advertising effectiveness testing, say TV as opposed to radio or direct mail.

FACTORS INFLUENCING THE TESTING PROGRAM

Up to this point, the discussion has been somewhat introductory in which the broad framework has been set. We are now prepared, with this background, to explore the more fundamental aspects of testing as it relates to planning. A testing program is a function of many variables, chief among which are the dimensions of the plan to be tested, the availability of standards, existing policies and procedures, company experience, experience of others, the qualifications of the planner, and the qualifications of the approving agent.

Dimensions of a plan

Although every plan has 13 dimensions, some of the dimensions have a greater influence upon testing than others. We will examine only the more important dimensions of complexity, significance, comprehensiveness and time. Testing can be an integral part of a plan in all phases; however, it sometimes helps to look at testing as a subpart of the overall plan. Such a subpart has dimensions just as has the overall plan, but they may be very different. Thus it is possible that a total plan can have a fairly high degree of complexity even when the body of the plan is fairly simple, if the testing component is highly complex. On the other hand, a total plan cannot be simple without all parts, including the testing component, being simple. We can say much the same for the time element. The total planning time can be long without the testing time being long, but if the total time is short, the subpart of testing time must also be short. It will be useful for us, therefore, to view the testing component within itself and relate it to appropriate parts of the planning process. As a further guide to the reader, let us point out that our definition of the various dimensions of a test plan are exactly the same as our definition of

dimensions for *any* plan as exhaustively treated in Chapter 2. Thus we see no point in redefining these terms, but simply suggest that the reader may wish to reread parts of Chapter 2.

Availability of standards

We noted in our discussion of means of testing that a great variety of techniques are available in general but only a few may be appropriate for a given test. We have also shown that a very sophisticated and accurate test, such as the actual field test of a new product, may not be used regardless of its desirability because the firm may lack sufficient financial resources or time to allow the test to be run.

Company experience

Frequently, reliance is placed upon company experience as a satisfactory test. In a sense, both the planner and approving agent may feel that similar plans and techniques were successful in the past so there is no need for new or independent checks. Many of the routine plans, such as annual departmental requests for salary adjustments, manpower additions or equipment replacements, may fall within this category. Although the plans are new, the formula used for allocating these resources may have been established several years before. Unless a new, independent check is made, there is grave danger that reliance or experience alone may lead to the implementation of a faulty plan.

Experience of others

A plan or a component of a plan may cover items in which the company has had little or no experience. A logical approach might appear to be one of checking the experience of others. Some common plans which may serve as examples are those dealing with the selection of vendors and distributors. Other examples would include the selection of employment agencies, choosing of job evaluation programs and advertising agencies. The key point is that the planner may be willing to rely upon the satisfied experience of others rather than make an independent or exhaustive check of his own. In a sense, he is saying that what is good for others is good enough for us. Note that the person responsible for approving the plan may think in a similar vein. His test of adequacy of a plan may be one of comparing it to known plans in other companies. Frequently, both the planner and the approving executive find comfort and protection in using the "best" practices of others as a standard. They feel that it will be more difficult for others to criticize their decisions when they are supported by evidence that similar plans have succeeded in other companies. It is easier to attempt to pass on the blame, if the

plan is unsuccessful, to those responsible for its implementation and use.

This is not to suggest that reference to the experience of others may not be of considerable value to a planner and approving agent. When comparisons are made with others to substantiate one's own findings or to inquire about possibilities perhaps not covered by the planner, considerable benefit can be derived from such an inquiry. When a complete independent test may require the expenditure of considerable time, effort and money, some of this cost might be reduced by building upon useful information easily acquired from others.

Existing policies and procedures for testing

One of the most important influences on the testing program at all stages of the planning process is that furnished by policies and procedures which have been established for testing. When policies and procedures are available, they will usually form the initial guide followed in the test plan. For example, an executive who is faced with the decision of having to accept or reject one or more marketing plans designed to introduce new products or to enter into new market areas may be guided by company policy which will allow a plan to be approved only when a certain return can reasonably be expected.

A plan may recommend the selection of a new vendor for the supply of certain raw materials or fabricated parts. In obtaining the necessary supporting data, the planner may have followed a rather tight procedure. Among other things, he might have been required to visit the vendor's plants and view first-hand his production facilities, have independent checks made on samples of the vendor's products and obtain several references from present customers of the vendor. The way in which each of these three checks is to be handled may be outlined in great detail.

Company resources

One of the restricting influences on adequate testing is the availability of company resources. In a broad sense, we can interpret resources to include manpower, testing equipment and facilities, as well as money. When a company does not have adequate resources, it must make judicious use of its limited resources. This it can do by testing only the most critical parts of the plan, by using sophisticated and expensive test procedures and equipment only when absolutely necessary, and by use of outside consulting firms who specialize in testing.

Qualifications of the planner

As demonstrated throughout this book, the most important person influencing the testing program may be the planner. There is one point

that should be made clear in order to explain the apparent hedge that the planner "may be" the most important influence. When plans call for fairly frequent tests which are expensive in time, effort and money, there may be a separation of the preparation of a plan and the testing of components of the plan. In this case, much of the responsibility for the test plan may be shifted to the person in charge of the test facility. However, even then, the person responsible for the preparation of the original plan may also determine the type of tests he would like to have run. He may simply stipulate the general items to be tested or he may submit a specific and detailed test plan.

The point to be emphasized is that the planner in most cases has a major role in deciding upon the testing program to be used. A planner may see two basic needs to be satisfied. One is the technical demands of a plan and the other is the psychological, as well as technical, demands of the approving agent.

In facing up to the technical demands of the plan, the qualified planner will first rely upon his own knowledge, education, and experience to guide him in testing various components of a plan. This would include such things as the correctness and completeness of data furnished and the suitability of the final plan. A qualified planner need not limit himself to his own ability to devise a suitable test plan, but, as indicated earlier, he will rely upon the advice and suggestions of others within and outside of the company. In fact, he may add one or more members to his planning staff to take care of the test needs. Conversely, the less qualified planner may fail to use proper tests either because of his own inability to devise suitable tests or his unwillingness to solicit the help of others.

Beyond the technical side of testing are the psychological needs as interpreted by the planner. We have in mind here the fact that the person or group responsible for giving final approval of a plan may require greater evidence of the technical accuracy and suitability of a plan than the planner may need or the plan may seem to require. The astute planner should be able to anticipate these needs and thereby supply whatever additional supporting evidence is needed. The planner is interested in having his plan approved. Thus he should also be interested in supplying whatever information is needed to allow others to pass independent judgment.

Qualifications of the approving agent

There are usually two principal parties to the planning process: the person who is responsible for formulating the plan and the person responsible for approving the finished plan. Particularly in the area of testing, the approach used is greatly influenced by the way in which each inter-

prets the qualifications, needs, and desires of the other. We are saying in effect that a planner will likely prepare some plans in a different form and will document them differently for one executive than for another. He learns over time the form preferred by the various executives he serves. On the other hand, an executive may demand from various planners different supporting evidence for the same general type of plan. In this case, the variable is the planner, and what is demanded of one may not be demanded of another.

This section considers the executive responsible for approving or rejecting a plan or component of a plan. When he receives a completed plan, his preference might well be to examine the conclusions drawn and the recommended course of action. He would rather not examine the raw data, say a market survey report, in any detail and would like to assume that the raw data are accurate and complete. To the extent he has had successful experience with the planner responsible for the preparation of the plan, he will be inclined to accept the data at face value. In fact, when a very close working relationship exists between the two and previous plans have worked successfully, the approving agent is likely to accept the conclusions drawn from the raw data and the recommendations as well without a great deal of testing on his part. Under these conditions, the executive is likely to concern himself with the suitability part of the plan and the relative merit of the plan over other plans. In other words, the executive will be inclined to assume that the plan is technically sound, and his primary role becomes one of passing judgment on the relative merits of the plan. Of course, to the extent that the executive lacks confidence in the planner, he will be apt to require considerable supporting evidence and will himself check out important components of the plan.

The approving executive has another direction in which he must look when he accepts or rejects a plan. He must remember that his superiors will measure his contributions to the firm by the success of his decisions relative to a fairly large group of plans. Just as the planner may conduct tests beyond the technical needs of the plan, so too may the approving executive wish more detailed and elaborate testing when the plan is to be viewed by a given group of superior executives. In a negative way, he may wish to protect himself from excessive criticism should the plan not work out as anticipated. In a more positive sense, he may wish to demonstrate to his superiors the care with which he examines all plans and perhaps suggest that he could handle even greater responsibility for approving additional plans.

The intellectual qualifications of the executive, supported by knowledge and experience, also influence the testing he will do. He may be content with the supporting evidence presented in the plan because he knows of

no other reasonable tests to apply to the components of the plan. Or, he may suggest additional supporting evidence because he sees possible errors which are not apparent to the planner.

Finally, the philosophy of management followed by the executive will greatly condition his testing program. If he believes in placing a great deal of authority and responsibility for the successful preparation and implementation of plans upon those who prepare the plans, he is more likely to limit his testing to those areas which fall beyond the authority of the planner.

SUMMARY EVALUATION OF TESTING

There are several meaningful conclusions which can be arrived at as a result of our analysis. We have seen that a testing program is a function of the nature of the plan and its components, the availability of standards, company experience, the experience of others, existing policies and procedures for testing, company resources, the qualifications of the planner, and the qualifications of the approving agent.

An effective and efficient testing program is most likely to be present when:

both the planner and executive responsible for approving a plan are well qualified and fully aware of the various sophisticated testing tools and techniques which are available

either planner or approver is not qualified to use certain desirable testing techniques, he calls upon specialists to assist him in testing

specific consideration is given in each plan, where desirable, for testing components; this may extend to the preparation of a separate subplan designed wholly for testing purposes

specific policies and procedures are established, and periodically reviewed, to guide those responsible for testing

adequate funds are available and used for acquiring necessary testing facilities and equipment

components of plans can be best tested by use of precise and easily verifiable standards.

DIMENSIONS OF A PLAN AND THE THEORY OF TESTING

As we have done in previous chapters, we will now show the relationship of selected dimensions of a plan to the planning process.

To the extent that a testing plan is complex and significant, there is a greater likelihood that the planner will find it advantageous to:

add to the planning staff members specifically qualified to perform the testing function

use sophisticated tools and techniques for testing

spend considerable time, effort and money in testing

supply elaborate test results with the basic plan when it is submitted for approval.

To the extent that a plan which calls for a given type of test occurs frequently, there is a greater likelihood that it would be advantageous to:

set up a separate testing staff

provide for permanent testing facilities

establish routine testing procedures

undertake periodic checks of the testing procedure to insure that the most up-to-date methods are used.

Part III

THE ROLE OF PARTICIPANTS

in the planning process

The major planning units in an enterprise are the board of directors, the president, and the top departmental executives. Their planning actions are augmented by the use of line subordinates, specialized staff personnel, and committees.

Chapter 7 describes the planning roles of the board of directors, the president, and the major departments. These are the units that have prime responsibility for planning the future of the enterprise. But they frequently operate jointly in committees formed for the purpose of planning. The executive committee of the board is an example. At other times, they appoint subordinate committees whose function it is to gather information or to make recommendations to them. The role of committees is discussed in Chapter 8. We have chosen to treat the executive committee of the board of directors first because of its obviously close relationship to the board and the other top-level planning units.

Recent years have seen the emergence of the specialist as an important participant in the planning process. Generally, the specialist is a staff man. His introduction to the planning function raises new problems—organizational, communicative, and others—which must be overcome. The role of the specialist and the problems he introduces to the business scene are examined in Chapter 9.

7

ORGANIZING FOR PLANNING: THE ROLE OF TOP-LEVEL UNITS

IN CHAPTER 1 WE INDICATED that organizing is universally recognized as one of the prime functions performed by every manager. Probably no other function has received as much attention in the literature of management. Our purpose in this and the succeeding chapter is to show how planning takes place in business enterprises; where planning is done in the organization structure, what steps are performed where, and how the dimensions of a plan are determinants of who does the planning. In this chapter, we deal with four administrative units: the board of directors, committees of the board, the president, and the operating departments. After describing the various roles of these administrative units, we submit to the reader certain hypotheses about the determinants of these roles and in some cases how these units might be more effective as instruments of planning.

BOARD OF DIRECTORS

Between the stockholders, the legal owners of a corporation,

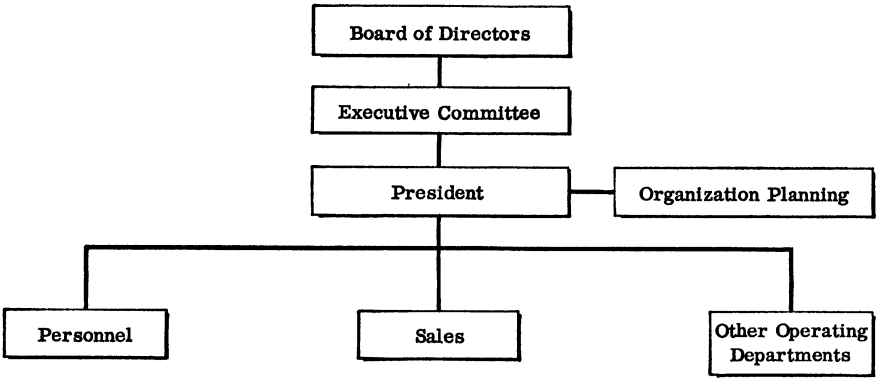


Fig. 7-1.

and the president, the chief operating executive, one finds the board of directors. On the one hand, the board of directors is subordinate to the stockholders and derives its full authority from them except as it is conditioned by the laws of the state incorporation. On the other hand, board members exercise full authority over the president and other executive officers. For all practical purposes, a board of directors usually has full authority, except where specifically limited, over all elements of the planning process and is free to delegate a small or large part of the responsibility to lower units.

Legal responsibilities of directors of a business corporation

To fully appreciate the role of the board of directors in planning, it is important to understand the legal environment in which it functions.

The fundamental legal responsibility of the board of directors is to manage the company. To this end, the law entrusts the board of directors with all of the powers of business management except (1) to do what would be illegal; (2) to do what requires specific shareholder approval; and (3) to act contrary to the charter and bylaws. In the eyes of the law, almost everything that is done on a day-to-day basis by what is called "the management" of a company is done either pursuant to specific provisions of the corporate chapter or bylaws or by virtue of authority expressly or implicitly delegated to management by the board of directors.[1]

There are two broad areas of interest to us. One is concerned with the level or amount of authority and therefore with board members' freedom to act. The other area is the degree of personal responsibility assigned

[1] *Corporate Directorship Practices,* Studies in Business Policy, No. 90 (New York: National Industrial Conference Board, Inc., 1959), p. 87.

each director in the performance of his role. Quite obviously a board cannot act unless it has authority to act. The major authority limitations are the legality of the act as such, the provision of the charter and bylaws, and the authority retained by stockholders. The legality of an act as a conditioning factor, of course, pertains to all units of society and is not peculiar to board members. It should be noted that whenever certain acts by a company are known to be illegal, the board of directors may prepare a special plan to attempt to change the legal status. Acts which have to do with right to work, fair labor practices, consolidation and mergers, pricing, and advertising would come under this classification. Let us emphasize again that these are not restrictions peculiar to a board of directors or to a corporation.

The provisions of the charter and the bylaws may limit the activities of the board of directors by prohibiting such acts as:

> . . engaging in any lines of business except those provided for (expressly or implicitly) in the charter,[1a] making loans to stockholders, making political contributions, issuing shares of stock except for special kinds of consideration, declaring dividends except from specified allowable sources such as current earnings or earned surplus.[2]

None of these restrictions places serious burden on the authority of board members to further the legitimate welfare of the corporation.

Other restrictions included within a charter or bylaws relate to authority retained by stockholders over such matters as "amending the corporate charter, selling the entire business, merging with another company, dissolving, etc."[3] Within these areas the board of directors cannot act as final authority. As a practical matter, the areas covered here are of such import that the frequency of occurrence is usually once, if ever. As a matter of fact, as will be seen later in this chapter, boards frequently solicit views of stockholders about matters clearly within their (the boards') authority to decide and act independent of stockholder approval.

In regard to the above-mentioned areas of authority and the relationship of board members to stockholders, and board members and stockholders to legal institutions, i.e., state government, we can say that the responsibility for approving plans falling within these restricted areas resides with stockholders and/or government agencies. Originating the idea

[1a] The lawyers call such extra-charter activities "ultra-vires." This prohibition is usually unimportant. The standard modern practice in drafting a corporate charter for a business corporation is to empower it to engage in almost any gainful activity that can be thought of that is open to a business corporation and that is in any way related to the line of business the incorporators actually have in mind. And if it turns out later that something was omitted that becomes needed, amendments to corporate charters are now relatively easy to make.

[2] *Ibid.*, p. 88.

[3] *Loc. cit.*

which becomes the basis of the plan, the preparation of the recommended plan and its endorsement are the responsibilities of the board of directors.

The second point under the legal responsibilities of a director relates to his personal freedom of action as conditioned by the recourse others may have upon him as a result of his acts. In other words, a director may have full authority to act but be reluctant to make a decision because of the high degree of uncertainty involved and the seriousness of the loss that would result from a poor decision. William J. Durka's opinions on this matter are:

> A director should exercise his authority with the same energy, diligence, enterprise, and carefulness that he gives (if he is ordinarily prudent) to his own personal affairs. . . . Where a director or the board fails to act with due care and, as a result, the corporation is in some way harmed, the careless directors will be held personally liable for the harm done. . . . But directors are not liable for honest mistakes in judgment, made in good faith and without carelessness. Business involves taking calculated risks. . . .[4]

It is clear from this statement that a board member need not fear the consequences of his acts as long as he acts in good faith and with due care. We will not discuss the areas of criminal penalties or special restrictions that may be placed on the actions of board members to protect stockholders from criminal or unlawful acts of board members. Our interest is in the freedom of action a board has to discharge its responsibilities.

Functions and duties of directors

In the section above we noted that:

> The laws do not spell out the duties of directors other than that they should manage the affairs of the company, so there are wide variations in the functions actually performed by boards of directors. However, there are seven areas of responsibility that appear to have general acceptance:
>
> 1. To establish the basic objectives and broad policies of the corporation.
> 2. To elect the corporate officers, advise them, approve their actions, and audit their performance.
> 3. To safeguard and approve changes in the corporate assets (issuance of securities, pledge of assets on loans, declaration of dividends, and conveyance of property).
> 4. To approve important financial matters (such as budgets, capital appropriations, officers' pay, financial audits), and to see that proper annual and interim reports are given to stockholders.
> 5. To delegate special powers to others to sign contracts, open bank ac-

[4] *Ibid.*, p. 88. Durka is the attorney for legal services of the General Electric Company. His opinions are based upon extended research which he conducted on the legal responsibilities of directors.

counts, sign checks, issue stock, make loans, and such other activities as may require board approval.

6. To maintain, revise, and enforce the corporate charter and by-laws.

7. To perpetuate a sound board through regular elections and the filling of interim vacancies.[5]

It might be well to emphasize again at this point that we are interested in the amount of authority directors have to take independent action. We have discussed the limitations imposed on their actions by law and stockholders.

Let us look at some of the points listed above which require elaboration to avoid confusion. Item 6 states: "To maintain, revise, and enforce the corporate charter and by-laws." Actually, the revision of the charter and/or bylaws is not done by the directors although they are responsible for making recommendations when a revision is desirable. A similar condition exists in Item 7: "To perpetuate a sound board through regular elections and the filling of interim vacancies." Directors are responsible for recommending candidates and scheduling the election, but the stockholders make the selection of all full-term directors. The point is that board members have the responsibility for seeing that proper action is taken in all of these areas, but it may not have authority to make the final decision.

We cite these examples to give the reader a greater insight into the nature of the director's job and his relationship with other units. It is not intended to be an exhaustive study of all duties and responsibilities.

Up to this point we have established two basic facts:

1. By law and by delgation, a board of directors has sufficient freedom of action to carry out its assigned responsibilities.

2. The responsibilities assigned the board of directors are broad in scope and are more concerned with establishing and controlling over-all company plans than with daily operational aspects of the business.

Board characteristics and effectiveness in planning

The characteristics of boards of directors have been established through a number of research works. Rather than repeat the findings of these researches, we will merely relate the characteristics of a board of directors to effectiveness in planning.

Recognizing that the size of the board will have an influence upon its effectiveness as a planning unit, we can say that as the board grows larger,

greater opportunity exists for the inclusion of specialists in the board's planning

the greater the need for precision and completeness in proposed plans

[5] *Ibid.*, p. 55.

the greater the opportunity for the presentation of various points of view, and
the greater the tendency for time consumption in the planning process.

As the proportion of "inside" members increases, as contrasted with "outside" members, the greater the likelihood that planning deliberations will lack objectivity; the less need for detailed explanation and orientation; and the greater the need for keeping stockholders informed and for seeking their opinions on major planning decisions.

As the number of functional interests (finance, marketing, production) increase as a per cent of the total board, the greater the likelihood that a balanced approach will be taken and the longer the period of deliberation.

The length of time each director serves on the board will influence the effectiveness of the board. As the term of the director increases in length,

the greater the level of understanding of company problems
the shorter the time required for deliberation of a given subject
the greater the stability of the board (especially when combined with staggered terms)
the greater the danger that the director will lose objectivity and a fresh view.

The total success of the board of directors is a function of the following:

1. Qualifications of each member of the board.
2. Adequacy of the total representation of the board.
3. Incentive each member has to perform his duties.
4. Degree of confidence existing among board members and between the stockholders and the board.

We can say further that the opportunity to maximize these desired attributes is enhanced when:

the board is properly balanced between inside and outside directors
members are selected on the basis of ability rather than title or position
adequate compensation is provided board members
stockholders are kept fully informed of board decisions and plans.

COMMITTEES OF THE BOARD

The next level of responsibility in the corporation is that of the executive committee and other committees specifically created by the board of directors. State corporation laws provide that the board can act only as a convened body. Individual directors have no legal power. Nevertheless, the board may delegate its ordinary powers to committees of directors, often referred to as committees of the board.[6] There is no uniformity among states regarding the delegation of authority by boards of directors to committees of the board.

The restrictions of the various state laws are significant to us only as

[6] For a thorough discussion of the legal status of committees of the board, see *Corporate Directorship Practices*, pp. 62 and 66.

they affect the freedom of the board to perform its assigned duties. There are two questions. Is the board allowed to establish committees of its members? If so, what is the extent of the authority that can be delegated to these committees? The answer to the first question is "yes," under most conditions, unless specifically restricted by the articles of incorporation or the bylaws. The answer to the second question varies by states, but, in general, the authority that may or may not be delegated is specified in the bylaws, the articles of incorporation and state statutes and usually covers matters of major concern to the board of directors and the corporation.

The important point from an administrative standpoint is whether or not a board of directors is empowered to create committees to assist it in carrying out certain basic functions. It is clear that they do have sufficient power to create a committee to perform the functions of research and investigation. The delegation of authority to these committees to act in place of the board or directly with stockholders is sometimes limited. These restrictions do not seriously impair the proper functioning of the board since most matter excluded from its power to delegate can usually be handled at regularly scheduled meetings of the full board.

It is significant that although many committees of the board are created by the resolution of the board as provided by corporation bylaws, some bylaws "detail such matters as the committees' size, functions, and powers, and the method of selecting members."[7] As will be seen later, this does not impose a serious restriction on the performance of the board.

EXECUTIVE COMMITTEE

The most important, and sometimes the only, committee of the board is the executive committee. Most of our remarks will be directed to manufacturing corporations, but we feel that the general conclusions we draw are pertinent to committees of all corporations.

Functions and duties of an executive committee

Perhaps we should emphasize again that the executive committee may be established by provision of the certificate of incorporation, bylaws, resolution of the board, stockholders approval, or statute of the state of incorporation, and that all executive committee members are also members of the board.

The authority of the committee may range from strictly advisory to the full exercise of board authority. In the broadest sense, the executive com-

[7] *Ibid.*, p. 66.

mittee can be said to perform the same functions and duties as the board of directors; in the narrowest sense, it may be only advisory to the board. Some of the specific functions of executive committees are:

1. Transacting the day-to-day business of the company that requires board action.
2. . . . formal actions required between board meetings such as bank account authorizations, and other minor legal actions requiring approval of the Board of Directors.
3. . . . generally consider matters which require studious attention and which this committee will conclude and submit to the full board in capsule form or discuss major problems thoroughly in the executive committee and arrive at a decision, which is then recommended to the full board.
4. . . . to periodically consult with and provide management with over-all direction in corporate affairs.
5. . . . to assure prompt action in the event of corporate emergencies.[8]

The functions quoted above indicate that the major purposes served by the executive committee are to act in behalf of the board in emergencies, to facilitate the performance of the day-to-day operations of the company and to advise the board. As a matter of course it appears that most executive committees tend to seek approval of the full board on most important decisions even when they possess authority to act independently of the board.

The authority granted an executive committee is related to the duties assigned which in turn is a function of the nature of the activities of the corporation and the frequency of board meetings.

As the duties are increased and the authority extended

the greater the likelihood that operating management will become more dependent on the committee

the greater the need for board control over executive committee action

the greater the problem of using outside board members.

Executive committee characteristics and effectiveness in planning

The number of members on the executive committee of the board is a function of the size of the full board, the total number of committees established by the board, the activities assigned the committee, and the number of inside directors on the board.

As the size of the executive committee increases, the greater the likelihood its actions will receive the unequivocal approval of the board, and the greater the likelihood the committee will be assigned decision-making authorities in the planning function.

[8] The quotations above are from replies to a National Industrial Conference Board survey concerning the functions of executive committees. See *Corporate Directorship Policies*, p. 69.

As the number of inside and functional members increases,

the greater the likelihood that an internally balanced approach will be taken

acceptance of proposed plans by subordinate persons and units is facilitated through participation

the greater is the need for outside board members to review the actions of the committee.

The length of time each member serves on the committee will influence the committee's effectiveness as a planning unit. As the service period increases,

the greater the level of understanding of company problems

the shorter the time period required for deliberation of any given plan

the greater the danger of losing perspective and a fresh view.

The total success of an executive committee is a function of:

the qualifications of each member

the adequacy of the total representation of the committee

the incentive each member has to perform his duties

the degree of confidence existing among committee members, and between the committee and the board and operating management.

These desired attributes can be maximized to the extent that: appointments are made on the basis of ability rather than title, position, or years of service; compensation is adequate for the needs of motivation; and the board delegates sufficient authority to accomplish the purposes for which the committee was established.

Boards and executive committees related to dimensions of a plan

The board and its executive committee deal with plans only when the plans are characterized by a high degree of significance. Comprehensiveness and complexity also increase the likelihood of top-level participation in the planning process. As the plans increase in significance, comprehensiveness and complexity, there is a greater likelihood that the full board will handle the matter rather than just the executive committee.

Boards and executive committees tend to deal with relatively long-run plans. The very purposes for which boards of directors exist are long range in nature; the establishment of objectives and the development of policies. Since the boards typically meet only infrequently (usually once a month), they could not effectively deal with plans covering only a few days or weeks. Long-range plans have no air of immediate urgency about them; they require slow, thoughtful deliberation—the kind of action that is fruitfully undertaken by groups such as the board or its committees.

Long-range plans require top-level decisions about what the future

product line shall be, what position in the industry the company shall seek, what the long-range manpower picture is and should be, and so on. These, of course, are decisions not usually left to subordinates and, as indicated, they are decisions requiring a variety of viewpoints and knowledge and various standards for judgment—in short, group action.

Board and executive committee planning, then, is a function of the time consumed in developing a plan and the time period covered by the plan itself. Conversely, the more frequently a given type of plan is developed, the less likely it is that the board will handle the matter. If preparation becomes a frequent daily or weekly task performed by the board or the executive committee, the chances are good that those bodies are performing operating duties that more judiciously ought to be delegated to operating executives and their staffs. On the other hand, plans developed at these high organizational levels tend to be *used* frequently. That is, they are standing plans that serve as guides to the daily operations of the firm.

As plans become more confidential, they are developed higher in the organization. The most secret of proposed company actions would be dealt with by the board itself or the executive committee of the board. At this level, plans tend to be formal and authorized. They tend to lack specificity since these organizational units would deal only with rather general plans covering large portions of the enterprise and with plans projected relatively far into the future.

Boards, executive committees, and the steps in the planning process

In the preceding section we discussed board and executive committee participation in planning, relating this participation to the dimensions of a plan. We did not examine *how* they might participate—that is, which of the steps in the planning process might ordinarily be undertaken by the board itself or by the executive committee.

Rarely will the board or the committee undertake all of the steps necessary to the development of a given plan. They are most likely to participate in first and last stages of the planning process, becoming aware of the need for a plan and approving the final plan. To a lesser extent they might take part in organizing the planning staff and assigning responsibilities. They will not ordinarily participate actively in the "obtaining approval to undertake planning," "gathering data," and "formulating tentative conclusions" stages, for example. The other intermediate steps also will usually be delegated to some subordinate executive or group. The board or committee, of course, evaluates data and draws conclusions when it reviews the final plan.

We have indicated that these top-level groups tend to deal with the

plans that are significant, long range, and confidential. As the significance, length of time, and required secrecy increase, the more steps in the planning process will be performed by the committee or the board itself.

Of course, in those instances where the board is required by statute or bylaw to gain stockholder approval, it tends to perform more of the steps —specifically the "obtaining approval of the final plan" step.

Perhaps it is inappropriate to speak similarly of the committee and the board; their roles are not identical. When the board delegates planning activities to the committee, the committee typically participates in more stages than would the full board—the full board then acting only as the agent for final approval.

OTHER COMMITTEES OF THE BOARD

We have discussed at some length the executive committee and its functions because of the significance of this top level unit. There are other committees of the board which also exercise considerable influence but which are created for more specific assignments. Typical committees are finance, audit, salary and bonus, and stock option. In general, what has been said about the characteristics of the executive committee would hold true for all or most other committees of the board. Committees as planning devices are discussed more fully in Chapter 8.

PRESIDENT

The president is included in the discussion of the board of directors and executive committee because of his intimate association with these units. As we have already indicated, almost all boards and many executive committees include the president as a member. Frequently, the president is chairman of the board and/or chairman of the executive committee. His orientation is as much upward to the executive committee and board as it is downward to operating personnel.

Since we are primarily concerned with the role of the president as it relates to the planning function, there is considerable advantage in looking at his assignment of duties and responsibilities from a position-description point of view. Below is a typical description of the president's position.

Duties and Responsibilities

1. To direct and generally supervise all Company activities, including but not limited to the development, production, promotion, and sale of its products and services.

2. To be responsible to the Board of Directors for the profitable operation of the Company, a reasonable return to investors, and the safety of the capital funds invested in Company enterprise.

3. To prepare objectives for the Company's future, and to recommend their adoption to the Board of Directors.

4. To prepare plans and programs for the attainment of approved objectives, including proposed expansion into new fields of activity; severance of unprofitable operations; and planned courses of action for times of economic crisis. To recommend such plans and programs to the Board of Directors.

5. To develop and administer Company policies governing the manner in which its business will be conducted, within the broad framework of policy which may be selected by the Board of Directors.

6. To coordinate the activities of all units of the organization. In particular, to insure that the operating units receive adequate functional advice, assistance, and service from staff units organized for that purpose.

7. To insure that adequate organization plans, procedures, and controls are employed by all units, to make possible the proper execution of their duties and attainment of their goals.

8. To report the progress of the Company and its components to the Board of Directors, including its performance against programs and objectives for sales, profits, investment, and growth.

9. To take action to correct unsatisfactory conditions that may arise in any phase of operations; and to order or direct whatever action may be deemed necessary to accomplish approved objectives.

10. To refer to the Board of Directors all matters of major importance to the Company's progress and well-being, for purposes of securing advice, guidance, authorization, and/or decision.[9]

In summary, the major responsibiliities of the typical president regarding the planning function are to submit recommendations to the board of directors regarding major policies, objectives and programs; to issue final approval of plans of importance but of insufficient significance to warrant submission to the board or executive committee; to interpret, coordinate and control approved plans; and to provide the necessary manpower and facilities for the proper implementation of the plans.

The president, the dimensions, and the steps in planning

What has been said of the board and the executive committee of the board holds true in general for the position of president. All are top-level organizational units. All tend to deal only with plans of major significance. The president is likely to deal with major plans that do not require a variety of points of view for their successful development. In general, the

[9] The material above is from the position-descriptions section in *Defining the Manager's Job,* Research Report No. 33 (New York: American Management Association, Inc., 1958), pp. 202-10.

executive committee tends to concern itself with matters of slightly less significance than the full board, and the president, in turn, is concerned with plans of lesser significance than those handled by the executive committee. Likewise, the president is likely to be involved in more of the steps in the planning process than is either of the superior bodies. These generalizations are valid only in part, however. The fact that the president nearly always serves on the executive committee and on the full board beclouds his planning role. He has not one but at least three planning roles.

INTEGRATION OF TOP-LEVEL UNITS IN PLANNING FUNCTION

For plans of major significance which result in the establishment of company policies, objectives, and commitments to major programs, the responsibility for performance of various activities in the over-all planning process is, in general as follows:

1. *Origination of ideas for plans:*

The board, executive committee, and president all are important sources of need determination. Each unit has shared responsibility. Primary responsibility belongs to the *board of directors.*

2. *Authorizing preparation of plans:*

Will be done by the board or committee only where plans are highly significant and comprehensive. Primary responsibility is the *president's.*

3. *Providing data for plans:*

All units share responsibility for providing data. Frequently, much required data are provided by consultants and units below the level of president.

4. *Preparation of final integrated plan:*

The *executive committee,* or some other committee of the board, and the *president*—depending upon the nature of the plan under consideration —share responsibility.

5. *Approval of final plan:*

Any of these three units may approve final plans, but, where the plans are of maximum significance and comprehensiveness, primary responsibility belongs to the *board of directors.*

6. *Implementation of plan:*

President

7. *Control over plan:*

President, with *Board* authorizing changes in the plans.

Although it is quite impossible to isolate each step in the planning process and relate it to a given unit, the above-cited assignment is sufficiently precise to serve as a guide. It should be emphasized that as the scope and importance of plans are reduced, the assignment or responsibility would change significantly. Using the breakdown above as a guide, and abstracting from the material already presented in this chapter, it can be said:

the more important the plan, the higher up in the organization responsibility for authorizing its preparation, approving its final form, and controlling its progress after implementation is placed

the more complex and comprehensive the plan, the greater the likelihood that data required for the preparation of the plan will come from units other than those preparing the plan

when the president is a member of the executive committee and board of directors, the flow of information and plans through channels should be easier

when the president is a member of the executive committee and the board of directors, the total time required for performance of the planning process should be reduced

the larger the ratio of inside to outside directors on the board and the executive committee, the less the likelihood of independent and impartial judgment being exercised in all stages of the planning process

the more frequent the meeting of all units, the greater the likelihood that an awareness will be had of problems fairly early in their development.

ROLE OF TOP-LEVEL UNITS IN DEVELOPING AND CONTROLLING MAJOR PLANS

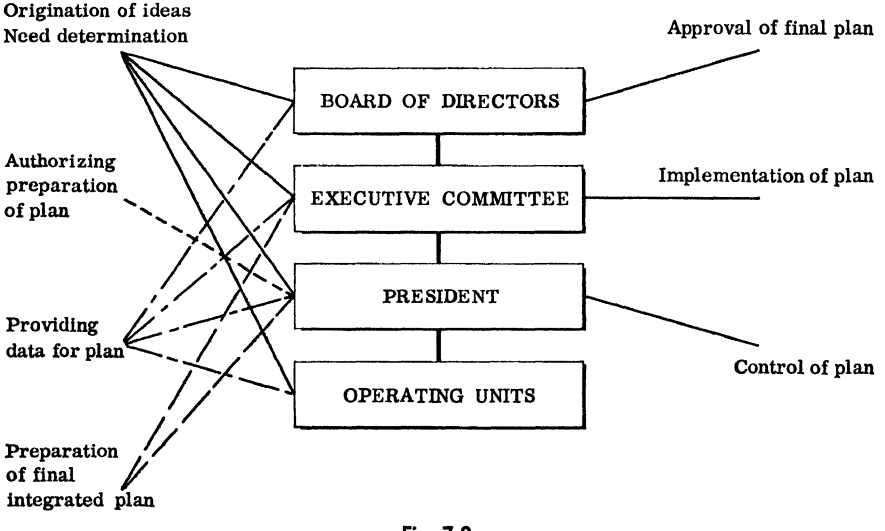


Fig. 7-2.

THE PLANNING ROLES OF MAJOR DEPARTMENTS

We are concerned here not so much with the nature of the total operation of each department, but rather with an understanding of how each department functions as a planning unit. We use the sales department as an example of "line" departments. The personnel department serves as an example of functional departments as planning units. Staff departments are then considered as a group with the organizational planning unit serving as an example. The primary functions of the first two groups *involve* planning, but planning is not the reason for their existence. In many cases, staff units, the third group, are established for the specific purpose of planning, e.g., organizational planning departments.

The several planning roles of the department head

Each department head plays several roles in planning. First, he is responsible for the formulation, approval and execution of plans affecting only his own department. The top production executive is called upon to work out suitable production plans, then sees that they are carried out. He will use information from outside sources and must conform to company-wide sales and output schedules, but essentially production planning is an intradepartmental activity. The second role played by the department head is one of participating with his peers and superiors in the formulation of company-wide plans. In this role, he may actually make decisions, or he may act as an information source or as an advisor. In developing company plans for expansion, the production head might make decisions about the type and size of new manufacturing facilities, on the one hand, and advise his superiors about the location of these facilities on the other hand. A third cap worn by the department head is that of advisor to other department heads in the development of *their* departmental plans. This role is distinguished from the second role cited above wherein the department head cooperates with other department heads and supervisors in the development of over-all *company* policy. Planning for manpower requirements within the personnel department may be vitally affected by changes in product design. It would be incumbent upon the head of the research and development department, were such changes in the offing, to inform the personnel department of such an eventuality so as to facilitate manpower planning. Likewise, production plans are meaningless in the absence of stated sales and inventory requirements. Essentially, then, this third cap means cooperation—cooperation through informing and giving counsel to department heads.

A fourth area of planning activity exists when the department head fills

more than one organizational position. The chief financial officer, for example, very frequently is a member of the board of directors and also serves on the executive committee of that body. Since we have already discussed the planning roles of the board and executive committee, we will focus our attention here on the planning roles of the department head.

Planning and the span of control

In traditional management literature, the span of control, sometimes called the span of supervision, is defined as the number of subordinates an executive can effectively supervise. Supervising may mean the organization, planning, direction and control of their activities, and seeing that they have the necessary resources. More often, it implies primarily direction and control of subordinates' activities. In either event, it can be seen that planning both broadens and limits the span of control.

Planning broadens the span of control in the sense that the superior executive can, by prudent predetermination of courses of action, make his direction and control more effective. This idea is based on the assumption that there is a return on planning in excess of the time spent in doing the planning; that is, the output from planning exceeds the input. This assumption holds true in varying degrees, of course, but both casual observation and empirical research will bear out its general validity.

On the other hand, it is quite obvious that if an executive spends *all* his time planning, he has no time for the other management functions of directing and controlling. In this sense, the more planning done by the executive, the less time he has for direct supervision of the activities of his subordinates, for the issuing and interpretation of instructions, for the receipt of feedback from controls, and so on.

There is quite obviously a point of diminishing returns for the operating executive—a point beyond which planning detracts from his supervisory capacity to direct and control. Finding the appropriate blending of planning with performance so as to maximize the area of effective supervision is a problem central to organization research of the future. With the present knowledge of administration, the practicing executive can only determine by "feel" and by trial and error the extent to which he ought to do planning himself or delegate it to his subordinates. Delegation of authority is the management action by which a condition of decentralized authority is brought about.

DECENTRALIZATION IN PLANNING

Business organizations in general have experienced a trend toward decentralization in recent decades. More decisions, and more important

decisions, are being made lower in organizations today than ever before. There are many causative and facilitating factors underlying this trend; the geographical dispersion of industry, the higher cognitive limits of the populace and particularly of managers brought about a raised level of education, political-philosophical emphasis upon the individual, more efficacious communications media and skills, more sophisticated control techniques, larger markets, larger and more complex firms, and so on.

As part of this trend, many firms experienced an organizational metamorphosis, going from small highly-centralized one-man companies to larger firms wherein considerable freedom of action was granted to subordinates. Organizing, staffing, and directing authorities were delegated. Planning, though, and control tended to remain the province of higher-ups, of top-management. Decentralized performance with centralized planning and control became a corporate way of life. More recently, the advocates of subordinate participation and "multiple management" have held sway and lower-level managers have participated in the formulation of plans which subsequently they are called upon to execute.

Planning logically ought to be among the last of the administrative functions to be delegated to subordinates. Plans either are or they embody the goals of the enterprise, department, or other organizational unit. Usually, this kind of activity is delegated only after a successful experience in delegating other duties and after the superior has developed much in the way of confidence in the judgments of his subordinates. It seems reasonable enough to expect that the highest authorities ought to chart the course the ship is to follow. But this applies only to major, company-wide plans. Department heads and their subordinates always have done planning. As has been pointed out, plans spawn plans. From the original statement of company aims down to the worker on the production line who studies the prepositioning of his materials, a hierarchy of plans exists. The question, then, has never been whether or not these subordinate managers ought to plan but rather how much planning should they do and how important ought their plans to be in the scheme of things. It is in the *importance* of the plans developed and carried out at the lower organizational levels that the real change has taken place.

Delegation of planning authorities and dimensions of a plan

We have already indicated that where the planning is done in the organization is dependent upon the nature of the plans. The delegation of planning authority is a function of the significance, comprehensiveness, complexity, confidential nature, and ease of control of a plan. Because several of these points have been covered in our discussion of boards, ex-

ecutive committees and the president, we will mention only a few of them here.

Decentralization of authority over production in general and over the planning of production in particular tends to come early in the growth of a business firm. This is because production, by and large, is easily controlled, because errors are not likely to be of severe magnitudes, and because most direct effects of production plans are felt within the production department itself.

Authority over financial plans, on the contrary, is tightly-held. Financial plans are themselves control mechanisms. If authority to plan, to approve plans, to authorize financial expenditures were dispersed, it would be difficult to retain control over many kinds of nonfinancial activities. Also, financial planning almost invariably involves the interests of the entire company rather than those of a single department. All other departments are affected directly. Financial plans are comprehensive.

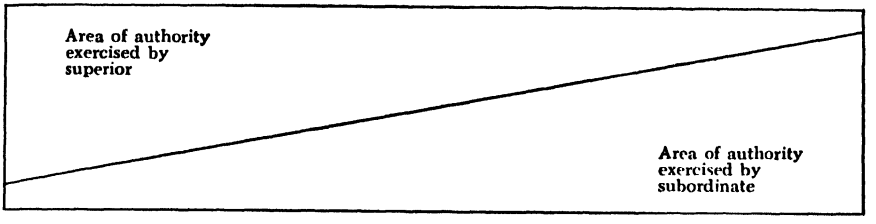
Financial plans, then, are difficult to control if delegated. If financial planning authority is dispersed, control over other activities suffers. Financial plans are significant; they are comprehensive. For these reasons, authority for financial planning tends to be centralized high in the firm.

Long-range plans tend to have great significance for the enterprise. Also, they are usually comprehensive. Thus, we find generally the longer-range the plans, the greater is the role played by top management and the lesser the role played by department heads and lower executives. Only the company's top executives have the broad knowledge of the company's characteristics, needs, and strengths that is necessary in long-range planning. The gathering of information may be delegated to junior executives. The design of component plans may be delegated to them. But final approval of long-range, company-wide plans is reserved for the president and the board of directors.

Delegation of planning authorities and steps in the planning process

The highest degree of centralization exists where the subordinate is left to discover the problem, design a tentative plan, approve the undertaking of planning himself, and carry the planning through to the point where its implementation is begun. Lesser degrees of decentralization exist where the subordinate discovers the problem, draws up and approves the undertaking of planning, performs the intermediate steps, but submits the final plan to a superior for approval. An even lesser degree of decentralization exists where the subordinate discovers the need, draws up a tentative proposal to undertake planning, has this approved by the superior, subsequently performs the other intermediate steps, finally submitting the finished plan for superior approval. Even more restricted free-

SUPERIOR-SUBORDINATE AUTHORITY RELATIONSHIPS IN PLANNING



Superior plans, announces decision. Subordinate implements plan	Superior perceives problem and need for plan, directs subordinate to gather data. Superior performs other intermediate steps; gives approval to final plan	Superior perceives problem and need for plan, directs subordinate to draw up plan. Subordinate performs data-gathering and other intermediate steps. Superior approves final plan.	Superior discovers problem and need for plan. Superior approves undertaking of planning. Subordinate performs intermediate steps. Superior approves final plan	Subordinate discovers problem and need for plan, undertakes planning on his own without superior approval, performs intermediate steps in planning. Superior approves final plan.	Subordinate discovers problem and need for plan, undertakes planning on his own without superior approval, performs intermediate steps, gives final approval to plan.

Note: No reference is made here to the significance of the planning done by the subordinate. If he performs all the planning steps from start to finish, but the plans themselves are of minor significance, a highly centralized authority relationship still exists.

Fig. 7-3.

dom for the subordinate occurs where the superior discovers the need and directs the subordinate to draw up a proposal for his approval. The extent to which any of these steps is left to subordinates for handling will depend upon the general administrative philosophy prevailing in the organization unit concerned, capacities of the subordinate, and upon the dimensions of the plan, previously discussed. Where the superior believes in and encourages subordinate freedom and development, the subordinate will possibly perform all of the steps in the planning process.

Authorization to undertake planning and approval of the final plans are among the steps least likely to be delegated because they represent the superior's control over the planning process. This control is exercised at two points in the process: one near the beginning, and the other at the end of the plan's development. Authorization to undertake the planning action, that is, approval of the tentative proposal, is more readily delegated than is final approval of the resulting plans. The costs of readying the plans usually are not great, certainly not when compared to the costs the enterprise may incur in the execution of the plans once they have been developed and approved. The possibility of error exists, but the company really stands to lose only relatively minor amounts in time, energy, and materials expended in planning. Authority to approve final

plans, on the other hand, may be of such extreme importance to the future of the enterprise that such authority is best retained in the hands of the highest officers. The plans may call for company commitments involving untold amounts of resources, or they may endanger public or labor relations.

The decision to undertake planning is revocable. It can be changed—usually without too much lost resources. The approval of final plans, however, sets in motion a multitude of subordinate decisions and commitments that are difficult to call back.

On any given plan, then, issuing approval of the final plan is the step in the planning process least likely to be delegated or, if delegated, it is likely to be delegated less deep into the organizational structure. The intermediate steps in the planning process are more likely to be passed on to subordinates for handling. The fact-gathering stage is particularly likely to be assigned to lower units.

Decentralized planning and motivation

Decentralization in planning evolves for reasons other than the mental and physical limitations upon an executive's knowledge or the existence of limits upon his span of control. Motivation to maximum performance will not usually occur if the subordinate executive is always told, in effect, "We have charted the course, now you take the wheel and steer the ship." Steering is not a very rewarding kind of activity. Most executives will demand that they somehow have a hand in determining where the ship is going. In a business firm this means participation in planning and policy making. Denied participation in these activities, the executive performs at something less than optimum capacity, or he leaves the firm and seeks employment elsewhere. The plans involved need not always be major and company-wide in nature, but a job without some relatively important planning is an incomplete job and an unfulfilling one. Effective motivation of department heads and other subordinate executives requires that they be given a significant role in the planning process.

It is very difficult to overemphasize the importance of participating (in decision-making) from a psychological point of view. Time after time, in industrial studies, research workers have come back to participation as a basic principle by which a subordinate may be given an opportunity to develop, his morale may be improved, and his skills and abilities may be maximally and productively utilized.[10]

[10] Mason Haire, *Psychology in Management* (New York: McGraw-Hill Book Co., Inc., 1956), p. 63.

While we are speaking of motivation, it is advisable to note that the delegation of planning requires something extra in the way of motivating subordinates. When planning is done at the top and the underlings are told what to do and when and how, they must merely be motivated to do what they are told in the manner prescribed. Control is easy, and if, perchance, motivations are inadequate, the controls soon spotlight this, and remedial action can be taken. This is not true when planning also has been delegated to subordinates. If they have developed the plans, they also very possibly designed the standards by which conformance to the plans is measured and therefore are in a good position to circumvent controls. Also, the plans themselves may or may not fit into the over-all plans of the company. Some of these plans can be checked on, of course. Others are of a more narrow detailed nature and would not normally come to the attention of the superiors once the authority for this planning had been delegated. Whenever one delegates any kind of authority, his control over that authority is diminished. This is particularly true with the delegation of planning.

This, in turn, means that the persons doing the subordinate planning must somehow be motivated to know and understand what the over-all plans of the company are, and then shape and direct their own planning to conform to these over-all plans. This requires the establishment of policies and methods that identify the personal interests of the subordinate planners with the interests of the enterprise. The techniques for bringing this about are not properly the subject of this chapter, but they include rewards of various sorts for maximizing contribution to the goals of the company, the establishment of comparative, competitive units for accounting and profit-and-loss purposes, decentralization, job enlargement, self-performance appraisal, participation in group decision-making, and so on.[11] Where planning is delegated, it becomes even more important that the firm find a way of promoting the identification of personal well-being with the well-being of the enterprise itself. This is always important, but assumes an added importance when the planning function is given to subordinates.

Another reason for decentralizing planning is that, irrespective of motivation, performance of the planning activity is necessary to the fullest development of the management potential of the executives. If the company has as an important goal the development of its management personnel into more effective executives, it will find that such development

[11] See Douglas M. McGregor, "The Human Side of Enterprise," in *Management Review*, Vol. 46, No. 11 (November, 1957), pp. 22-28.

will not take place in the absence of some significant delegation of the planning function. One cannot develop effective managers without giving them experience in all of the major areas of executive activity—of which planning is one of the most important. A person in an executive position who is not allowed to plan is foregoing training in an area too important to be left to chance. This is not to say that planning authorities must be delegated and that executive development must be promoted. Rather, *to the extent that* executive development is an important goal of the enterprise, planning must be performed by those persons the company wishes to develop.

Decentralization and coordination

Decentralized planning, like decentralization of any other management function, raises the spectre of coordination. Effective planning requires delegation, if for no other reason than that no one person can be cognizant, knowledgeable, and appreciative of all facets of an enterprise. Delegation to some degree is necessary and inevitable. At the same time, effective planning requires centralization—in the sense that somewhere, sometime these diverse plans developed at various places in the organization must be fitted into a whole, must fit into the general plans of the enterprise. Effective planning requires decentralization. Effective coordination requires action from a central point. This is the organizational dilemma of planning.

Line versus staff planning

True decentralization requires that more decisions and more important decisions are made lower in the organization after the delegation of authority than before such delegation. In delegating authority to plan, every administrator is faced with a choice between delegating such authority to his subordinates in the line organization or delegating it to some staff assistant. If he chooses to delegate to his line subordinates the right to plan and to make planning decisions, decentralization takes place. If he chooses to delegate planning duties to a staff assistant who then advises him, decentralization has not occurred. The decisions are still made by the administrator himself at the same level in the organization as before. Only some of the investigatory and preliminary work has been done by the staff assistant, the real decision-making remaining with the original executive.

If the administrator delegates some of his planning duties and authorities to a line subordinate, that line subordinate takes on such plan-

ning activities in addition to all of the other duties he performs as a line manager. These would include many other types of activities which could be classified under one or more of the other management functions: organizing, directing, controlling, and staffing. Examples might be reading reports, hiring and firing, conferring with subordinates, reporting to superiors, and diagnosing breakdowns. The planner in this case is not a specialist. Under these circumstances planning sometimes suffers because of the pressure of other duties. At the same time, planning is realistic. It takes place in a practical setting, and it is done by practicing executives. It has none of the shortcomings of "ivory-tower" thinking.

Planning done by advisory staffs has the advantage of specialization and concentrated attention. There are fewer of the day-to-day pressures that plague the line executive and act as serious deterrents to planning for the future. The nature of the plans themselves may call for specialization. For example, the purchase of raw material may be so complex that plans for its purchase must be handled by a specialist—one who is familiar with prices, price trends, supplies, demand factors, consumption requirements in the company, quality differentials, and so on. The plans are so complex, affected by so many variables, that they require full-time study. In such a case, it is very likely that planning would be done by a specialist.

But planning by advisory specialists has shortcomings. The people who do the planning are not those who carry out the plans. This can lead to plans which overlook the practicalities in the workshop world or in the salesman's face-to-face meeting with his customer. Also, the advantages of specialization will result only if the staff is in fact left free to concentrate on planning. Many times they are not. Staffs, too, are called upon to do tasks other than plan. Often they do "legwork" for the executive. Sometimes, they are used as means of communication, conveying orders, thoughts, or information. They may spend their time organizing, staffing, directing and controlling the activities of the staff itself. Generally, these nonplanning duties are not sufficiently voluminous nor time-consuming to vitiate completely the advantages deriving from specialization in planning. These advantages are so considerable that greater and greater use of staff specialists is being made in American business planning. The problem becomes one of using the specialists in a way that maximizes their advantages while at the same time taking care to minimize the dangers accompanying their use. Chapter 9, and Chapter 10, deal specifically with this problem.

The executive will assign planning duties to staff or to line subordinates, depending upon how close he wishes to retain control over the activity. If

the plans call for uniformity, if their implications for the company's welfare are great, if only the executive himself has the knowledge necessary to make decisions, he will likely assign such duties to an advisory staff assistant. If, on the other hand, decisions must be close to the point of performance, if the executive wishes to develop his subordinates as managers, or if his own duties are already overwhelming, he may delegate such authority to a line or functional subordinate.

Decentralization is a function of the significance, comprehensiveness, complexity, confidential nature, and ease of control of a plan, and the administrative philosophy of the superior executives of the firm. The greater the significance, comprehensiveness, and confidential nature of a given plan, the less likely authority over that plan is to be delegated, and the fewer the steps that will be performed by the subordinate.

To the extent that important planning authorities are delegated to subordinate units,

the more likely that the subordinate gives final approval to the plan

the greater the number of steps of the planning process engaged in by the subordinate

the greater the likelihood that the subordinate will take planning initiative

the greater the likelihood that the subordinate will participate more readily in implementation of the plan

the greater the development of subordinate executives.

AUTHORITIES EXERCISED IN PLANNING[12]

Authority can be classified and analyzed in many different ways: formal and informal, policy-making and operating. A useful classification for our purposes is to break formal authority into three categories: line, staff, and functional. The role of the planner will vary according to which of these types of authority he possesses, or, if he possesses more than one, which he exercises at a given moment. The financial department of a business enterprise is a useful vehicle for illustrating distinctions between these types of authority.

Finance, production, and sales are often said to be the three legs of the foundation upon which the business edifice is built. In this sense, many students of business administration treat finance as well as production and sales as "line" activities. Other writers on the subject refer to production and marketing as line, while designating finance as a facilitating service or "staff" activity. When finance is designated as being a staff activity,

[12] This discussion centers on formal authority. See Chapter 11 for a definition of authority and a discussion of the effects of reliance on formal authority and the role of persuasion or influence in planning.

its duties are frequently broken down into those that are purely advisory in nature and those wherein "they carry out and make decisions with respect to these functions at all levels of the company."[13] In reference to the latter activities, it is usual to point out that "these are always service activities performed for the chief executive, division manager or other line head."[14] This distinction is not a very useful one. It is, of course, helpful to point out that the financial executive's duties are decision-making and decision-executing as well as advisory. But when he is making and carrying out decisions, it serves little purpose to point out that these are "service activities performed for the chief executive . . . or other line head." Nearly all activities of line departments (production and sales) could also be identified.

More useful distinctions might be those made by many students of organization. The finance executive acts as an advisor. He also makes decisions and carries out those decisions. When he does this, his authority is obviously of a different variety than the advisory authority just mentioned. He has the right to make decisions, to determine policies, methods, and procedures for financial activities throughout the firm. This is called "functional" authority. It differs from staff authority[15] in that the specialist need not go to his superior with his recommendations; he may adopt and enact them himself. It differs from line authority in that it is specialized (limited, for example, to finance) and in that it extends horizontally across the enterprise, i.e., it is exercised in other departments of the company. Line authority, in contrast, is not specialized, not limited to one field, and is confined to the organizational unit in which its holder works. The production department head has no authority in the sales department; his is line authority. Line authority involves the right to hire and fire. It involves many other things as well: the assignment of work, recommendations for pay increases or promotions, granting time off, and so on. The right to fire is often described as the "acid test" of line authority. There are many present-day qualifications of this right, but it is clear that the functional officer, the financial executive, does not have this right outside his own department. He does have functional authority to plan, to establish financial methods, procedures, and policies throughout the company.[16]

[13] *Organization of Staff Functions,* Studies in Personnel Policy No. 165 (New York: National Industrial Conference Board, Inc., 1958), p. 22.

[14] *Ibid.,* p. 22.

[15] Technically, staff or advisory "authority" is not authority at all, as we have defined the term here. It does not involve the institutionalized right to limit choice (see Chapter 11). Perhaps, it would be more properly designated as staff influence.

[16] Like any other manager, the functional executive does not unilaterally determine *all* policies for his special field. Plans of major significance and comprehensiveness will be arrived at after consultation with colleagues and possibly only after approval by his superior.

The authority to plan, to approve financial plans, and to oversee their implementation may involve all three types of authority. If research is done, plans developed and then sent to a superior for approval or disapproval, this is essentially an advisory activity. On many occasions, financial plans will be initiated, approved, and implemented by the financial officer himself. Where these plans involve other departments, requiring action or compliance on their parts, it represents the exercise of functional authority. Where the financial officer delegates to his subordinate—say the assistant controller—the authority and responsibility for executing the plans, he is exercising his line authority over the subordinate.

In his daily actions, the holder of functional authority may seem to be more an advisor than a functional executive. He depends upon persuasion and expertness much more than upon his ability to "order" that any action be taken. His is a distinctive position, however. He does not have to refer all advice to his superior for action. He does not depend solely upon superiority of knowledge. His words have an authoritarian ring to them even when he is merely advising. When he sends a directive to other departments, it is expected that it will be complied with. On the other hand, his directives can be questioned and challenged by the line executives involved. The recipients of his directives have, in effect, two bosses; when the chips are down, they listen to the man who hires and fires and recommends them for pay increases and promotions—their line superior.

These distinctions are important to an understanding of the roles played by the major department heads. The description of functional authority in the case of the finance department holds true also for the personnel, purchasing, and other specialized functional departments which exercise, essentially, functional authority.

SALES, PERSONNEL, AND ORGANIZATION PLANNING DEPARTMENTS AS PLANNING UNITS

We are going to examine the planning roles of three major departments in order to show how these units function in developing company plans. The first of these, the sales department, is characterized by the use of line authority. The second, the personnel department, is characterized by functional authority. Finally, we look at the organization planning department, which is a staff unit typically having only advisory status.

Sales department

Place on the organization structure. The primary function of this department is sales—getting the finished product from the producing unit

to the ultimate consumer. The head of this unit is known variously as the sales manager, director of sales, or director of marketing. He usually reports to the president. He is often a vice-president. Like the financial executive, he frequently serves on the board of directors and also on the executive committee of the board. Consequently, he participates in the planning process at several levels.

There is no standard breakdown of the duties necessary to perform the marketing function. The amount of specialization and the number of subunits depend largely upon the size of the firm; the larger the company, generally, the greater the subdivision of the general function. Also, it will depend upon the manner in which subdivision is accomplished—by product, by region, by nature of activity (advertising, direct mail), or by kind of customer. A common breakdown includes such sections as sales promotion, advertising, market research, and field managers.

Delegation of the planning function. Unlike personnel, sales activity does not pervade all other departments. All departments are engaged in personnel management of one sort or another, but they are not all engaged in sales management, even though sales department action affects them vitally. Sales plans tend to be very significant, but they are not comprehensive in the sense we have used that term here, meaning interdepartmental.

Sales plans so crucially affect and shape the destinies of the firm that control over them cannot be passed far down the chain of command. The flow of sales orders are the life-blood of the enterprise. Therefore, even though sales plans may not be extremely comprehensive, their significance demands that they be approved fairly high in the organization—often by the president himself, or by the board—even where the plans are concerned with purely distribution matters.

The sales department head may delegate what planning authorities he has to his subordinates, particularly the marketing research unit, but these authorities usually deal with the initiation of planning action and the development of plans, with final approval still retained high in the department's structure. Implementation and control, again, may be performed at lower levels, but the critical act of approving the plans tends to remain highly placed.

In brief, the chief sales executive refers nearly all major plans to his superiors for approval because they are so directly vital to the welfare of the company. On intradepartmental planning that causes minimal ramifications in other organizational units, the sales department head will make the decisions, delegating or not as he chooses. Usually, final approval of important intradepartmental plans remains in the hands of the top sales executive or, in large companies, his immediate subordinates. Marketing

is characterized by its subordinate managers having a little less freedom in the development and approval of plans than that of their counterparts in the personnel department.

Specific planning duties of the sales department head. The sales manager takes the lead in developing company-wide policies, objectives, and procedures in connection with sales. He acts as an advisor to the president, making recommendations to him in such areas of planning as the president may have reserved for his own action. This may include such subjects as costs of distribution, economic conditions, market trends, development of new products, and changes in product line.

He aids other departments, both line and staff, in their planning by informing them of the plans established for the sales department and by furnishing information generally.

He approves and coordinates the planning within his own department, delegating much planning detail to his subordinate units. His authority to approve and execute plans is usually limited to his own department.

He develops the organization plan for his own department, and performs the planning usually done by a line executive: manpower, budgets, and materials.

Marketing research. Marketing research[17] is one of the organizational subunits whose primary *raison d'etre* is planning. Much of this section deals with fact gathering and interpretation. Sometimes, the information gathered is organized and interpreted, and projected courses of action are designed for submission to the head of the marketing department for his approval. Sometimes, the information itself—along with its interpretation—is presented, with the rest of the planning done at higher levels. In either case, the purpose of the marketing research unit is planning—in the one case, actual planning, in the other case, supplying information in forms useful in planning.

The production planning section in the production department has a similar role except that it usually executes its own plans. That is, it determines (within limits) when a given product will be scheduled into the plant or department or machine, and then proceeds to carry out such plans by dispatching the orders for work to begin. Subsequently, it keeps records of progress against the plans for control purposes. In contrast, the marketing research unit gathers the facts, develops tentative courses of action, then submits these to higher authority for approval. Of course, the fact-gathering activities must themselves be planned, and, in this sense, the marketing research unit not only develops plans but implements them as well. Nonetheless, its primary function is to supply superiors with in-

[17] "Marketing research," as used here, includes the concepts of market research and consumer research as well.

formation to use in *their* planning activities, or to supply them with recommended courses of action.

Marketing research must work very closely with several other organizational units, particularly sales promotion and advertising within the marketing department, and with the research and development department on the "outside." There is and must be a nearly constant interplay among these units. Technical aspects of new product research must be checked against market feasibility, as determined through marketing research. Perhaps this will call for the dropping of some product-research projects, the redesign of products, or the addition of new projects to the program. Such day-to-day cooperation is indicated by a listing of the activities of the American Can Company, whose Commercial Development Department includes a broader range of activities.

1. Analysis of long-range trends in consumer items for which the company's products are utilized.
2. Market investigation:
   a. Consumer preference
   b. Potential volume
   c. Probable price levels
   d. Sizes and styles
   e. Geographical and chronological demand
   f. Distribution methods
3. Contact with markets to determine needed modifications of currently produced products:
   a. From the user's standpoint
   b. From the consumer's standpoint
4. Coordination of efforts in the development and introduction of new products.
5. Coordination of efforts to translate successful research results into company practice.
6. Market testing.
7. Sale of pilot-plant production.[18]

Summary. The sales department is located high in the organizational structure. The top sales official nearly always reports to the president. Sales plans are not comprehensive in the sense that they are acted upon or directly affect many departments, but they are so significant, so important, that all major sales plans are approved by the company's highest officials. On intradepartmental plans the authority for preparation and execution of plans is passed on down to subordinate management levels, but final approval still comes from the top salesman. Market research is an

[18] F. B. Newcomb, "Organizing for Commercial Development," in *Organizing for Product Development*, Report No. 31 (New York: American Management Association, Inc., 1959), p. 107.

activity within the marketing department that has planning as one of its principal reasons for existence.

Personnel department

Terminology varies among companies. Sometimes this department is called the personnel department. Other firms refer to it as the labor relations department. Still others call it industrial relations. Sometimes "personnel" is a subdivision of the industrial relations department, which also includes public relations and union-management relations. Terminology notwithstanding, there is usually one organizational unit which deals principally with the human resource. We shall refer to this as the "personnel department" which will, in turn, often have subdivisions dealing with union-management relations, public relations, and other activities.

Place in the organizational structure. The personnel department reports at either the same level or on a lower level than the sales and finance departments report. Very rarely is it located higher in the organizational hierarchy. In the larger firms the chief personnel officer is likely to have an organizational status equal to that of the top sales and finance officers. This means that he usually reports to the president and is often a vice-president. In smaller firms the finance officer often enjoys a superior status with the personnel officer, reporting one level lower—perhaps to the production chief.

Primary activities of the personnel department can be classified as (1) getting the people to the job (recruitment, selection, placement), (2) training the people for their present and future jobs (training and development), (3) compensating and motivating employees (wage and salary administration, counseling), (4) continuing and promoting good union-management relations (grievances, contract negotiations), and (5) employee services (medical and insurance benefits, recreation programs). Many other activities are often assigned to the personnel department, some of them closely related, others quite unrelated to its other activities. These include such diverse areas as safety, cafeteria management, and publication of the company newspaper.

The internal organization of the personnel department reflects the classification of activities indicated above.

Delegation of planning authority. As we have indicated, finance, by and large, is characterized by the centralization (nondelegation) of authority. More particularly, authority to plan and to approve of plans of a financial nature is reserved for the president, or vice-president, the chief financial officer, and perhaps a small number of his subordinates. This is true to a lesser extent with personnel planning. Greater authorities and greater

freedom of action in the approval of plans pertain among those subordinate executives who handle personnel matters. One of the reasons for this is that personnel plans are not general control mechanisms as are financial plans. Another is that any given error is likely to be less costly to the company. Also, uniformity of policies, procedures, plans and methods is not quite as essential in personnel as in finance. (There are some major exceptions, of course, e.g., wage policies.)

Authorities of personnel department in planning. The personnel function involves the use of both functional and advisory (staff) authority. The personnel manager may first develop personnel plans, then make recommendations to his superiors for their approval. This is especially true for major plans involving company-wide matters such as in the case of labor negotiations or the establishment of standardized interdepartmental wage rates. But on less explosive issues the personnel department may plan, approve the plans, and put the plans into effect without reference to higher authority. This might be the case with planning for changes in hiring and selection policies and procedures or in the development of new training programs. The execution of these plans might involve the issuance of directives to other departments and require action of those departments. Where the specialist (personnel manager) makes decisions and then puts them into effect in the other departments of the firm, he is exercising his functional authority. In so doing, he does not have to refer his plans and decisions to his superior for approval. Rather, he makes the decision and implements it himself, and his colleagues in other departments are expected to carry it through.

The personnel department head acts as an advisor to his superiors, developing plans of action for them to approve or disapprove as they see fit. In his relations with other departments, the personnel manager may exercise functional authority or merely advise. Within his own department, he, of course, exercises line authority.

The personnel department sometimes includes a subsection devoted to organizational planning. This function will be examined specifically later in this chapter. Let it suffice here to say that it is concerned with study, experimentation and research to find the optimum organizational arrangements for present operations and to anticipate future developments in order to devise the most appropriate organizational structure for handling such developments. In this particular activity, organization planning, the personnel department's role is nearly always advisory. Organizational changes of any major significance must be approved by persons at the general management level, since they invariably involve important relationships between different departments in the firm. The personnel department may also consult with other departments with respect to the

internal organization of those departments. Here also, the role is an advisory one.

In a multiplant organization, the chief personnel officer will have an additional relationship—that of an adviser or line superior to the personnel directors of the several plants. Where those directors are responsible directly to the chief personnel officer and not to their respective plant managers, his relation is that of a line boss; he approves their pay increases, assigns them their work in a general sense, and could, if necessary, dismiss them. In this situation, his planning role in relation to them is just as if they were in a single plant and these men were his direct subordinates. That is, he reviews their plans, approves those he sees fit and rejects others, and delegates whatever authorities he chooses to them for approving and instituting their own plans. If the personnel directors in the plants are responsible not to the chief personnel officer but to their respective plant managers, the chief personnel officer in the central office will advise them. Often this advice has overtones of functional authority however, since his suggestions may become *de facto* orders.

Specific duties of the personnel department head. The extent and importance of the personnel manager's advisory responsibilities were described in a National Industrial Conference Board Report, as follows:

> The personnel manager recommends to the chief executive objectives, policies, and programs designed to provide for most effective utilization of human resources in attaining the objectives of the enterprise. The personnel manager serves as an adviser to top management on personnel planning and advises and counsels with line and staff managers in the divisions and departments of the company in the interpretation and application of personnel objectives, policies and procedures.
>
> In Alpha-Beta Food Markets, the personnel manager develops and recommends to the president policies and programs for employee relations. In Castle and Cooke Terminals, Limited, the head of personnel collaborates with line and other staff managers in developing broad proposals for personnel policies.
>
> Once broad personnel objectives and policies are approved by the company's top authority, the personnel function provides advice and service to the line organization and other staff heads to put them into effect. In a large insurance company, the vice-president of personnel plans, develops and provides, as needed, organization-wide personnel services in conformity with approved objectives, policies and programs.
>
> . . . In quite a few companies (the personnel manager) may act as the organization planning specialist for the entire company.[19]

In addition to the duties listed above, the personnel manager, of course, engages in whatever nonpersonnel planning is required to run his

[19] *Organizing of Staff Functions*, Studies in Personnel Policy, No. 165 (New York: National Industrial Conference Board, Inc., 1958), p. 57.

own department effectively. This will include plans for getting new equipment, the expenditure of funds, for changing intradepartmental work groupings or assignments, and so on.

Summary. The personnel department is one of the primary divisions of the firm. It reports at a level equal with those of the production, finance, and sales departments. The personnel officer participates in the development, adoption and execution of some of the enterprise's most far-reaching plans.

The personnel manager's job involves the use of several types of authority in performing his planning duties. He advises and recommends, he makes decisions and approves plans affecting other departments, and he plans and carries out plans applying to his own department. These represent the use of staff, functional, and line authority respectively.

Organization planning department

Departments of organization planning have only recently come into being. They have become more numerous and more influential as business firms have grown in size and complexity and as a body of knowledge has been developed in the field of organization. Generally, only the larger companies are able to specialize to the extent that one organization unit can devote its entire energies to the study of problems of organization.

The major function of the organization planning unit is to help to establish and then to maintain the division of duties that will most contribute to the accomplishment of the firm's objectives. This involves the grouping of activities (departmentation), determination of authorities and responsibilities attaching to a given position, defining authority-responsibility relationships among the many units of the enterprise, and other duties described below.

> It can search continually for the problems the . . . structure is creating—for gaps in authority or for overlapping authority. It can watch for red flags from departments that are getting excessively squeezed by the organizational structure. It can look for places where committees can operate better than individuals and for places where individuals can operate better than committees. It can feed back to the brains of the organization some information about the effects of the organization's own behavior.[20]

Place in the organizational structure. Because of the broad company-wide nature of the field of organization planning, the director of this department usually reports to the president, sometimes to a vice-president. As has been indicated earlier in this chapter, the work of organization

[20] Harold J. Leavitt, *Managerial Psychology* (Chicago: University of Chicago Press, 1958), p. 282. Leavitt adds a cryptic evaluatory comment: "Unfortunately, many departments of organization don't do these jobs. They draw charts instead."

planning is sometimes done by other executives within the company—most often by the company's personnel officer. Where this is true there may be a subunit within the personnel department which concentrates on improving the company's organization structure. This ordinarily occurs in companies which are relatively large, yet have not reached that stage of growth where full-time specialization on organization matters is warranted.

In the Columbia-Geneva Steel Division of the United States Steel Corporation the organization planning unit reports to a vice-president who is an assistant to the president.[21] This group has the following responsibilities:

Clarifying and recording management objectives and administrative policies
Defining responsibilities and limits of authority for the major units of the division and interdepartmental committees
Developing plans and programs for improving the division organization structure
Providing basic organization analysis for selecting and developing management personnel
Coordinating the division salary administration program
Developing organization and force (manpower) controls
Conducting management research
Providing staff assistance to department heads in the application of the above where required.[22]

Delegation of the planning function. Although other management functions (directing, or controlling) must be carried out in the performance of its duties, planning is the very purpose for which this department is established. All other activities are facilitating ones. The department is always a small one, made up of relatively few employees. While being few in number, its personnel are highly educated and experienced. Important authorities are delegated to subordinates by the director of organization planning. These involve rights to perform whatever investigatory and analytical activities are necessary to carry out their major function. However, as in every other instance, their superior can delegate to them only authorities that he himself possesses. As is seen below, the authorities of the director of organization planning are limited.

Authorities exercised in organization planning. The department or division of organization planning is a staff unit. In nearly all cases its authorities are confined to advising and counselling. Very seldom is the director given the right to issue orders to anyone outside his own unit or to execute any plans he and his subordinates may have developed. In this sense, this

[21] See *Improving Staff and Line Relationships*, Studies in Personnel Policy No. 153 (New York: National Industrial Conference Board, Inc., 1956), p. 31.
[22] *Ibid.*, p. 32.

unit is an excellent example of the use of staffs in the organization structure. It comes closer to fitting the theoretical description of an advisory staff than most other staff departments. This is not to say that the organization planner makes no decisions. Indeed, he does make decisions—those that are necessary to the carrying out of his functions as an advisor to his superior. But like other staff officers, he does not make decisions that result *directly* in line action. The director is delegated broad powers to initiate planning. He may determine the need for a plan, gather the necessary information, analyze and evaluate this information, and prepare a final plan for action. But final approval of the plans is reserved for his superior. Thus the decision that will result directly in line action is made by the superior of the director of organization planning.

Even where this unit is called the "department of organization planning and control," its activities are still usually limited to planning and advising. It makes checks and audits to see that organizational plans are being adhered to, but any anticipatory or remedial action must be taken through the line executive to which the organization planning unit is advisory. Thus its control activities, like its planning activities, are limited to investigation, analysis, evaluation, and advising. The director, of course, exercises line authority over his subordinates, such authority being confined to his own department.

Specific planning duties of the director of organization planning. A representative statement of the functions of this executive is given below:

I. Objectives

The purpose of the function of organization planning and control is to set up and maintain a rational division of work and to check its effectiveness (through a program of integrated studies).

II. Functions

A company-wide program of organization analysis and improvement is to be carried out, roughly in the following order of priority:

1. Analysis and evaluation of the company's organization structure
2. Development of a uniform approach to program and project planning and progress reporting
3. Analysis, improvement, and formalization of the Company's policies and procedures. This is to be accomplished partly by a process of recording in manuals the policies necessary to exercise competently the different management functions
4. Management organization and policy audits
5. A personnel inventory of existing members of management
6. A replacement and executive development policy
7. A policy of salary controls and adjustments
8. Application of work simplification and work measurement to administrative and clerical functions
9. A policy of executive selection

10. A policy of executive merit rating
11. Organization, executive and labor force controls to assure satisfactory structure and optimum size force

III. The Director's Program Responsibility

In the development of a program the responsibilities of the director of organization planning and control are in the main as follows:

1. A description of the program, including its objectives and scope
2. A general plan of action for its accomplishment
3. A statement estimating probable costs
4. A statement estimating probable benefits
5. A schedule for its completion
6. A system for controlling results and reporting progress
7. Approval through the appropriate executive officer

IV. Relationships

The Director of Organization Planning reports to the President.[23]

Note that this statement indicates that the director's duties are far broader than merely dividing duties into groups for purposes of departmentation; that is, making recommendations relative to organization structure. "Organization" planning in most cases is taken to include such other aspects of managing an enterprise as management inventories, executive replacement and management development policies, and policies concerning executive selection and compensation.

Summary. This department is created for the purpose of relieving the president of some of his planning duties and to bring specialized knowledge and skills to bear on organization problems. It is a staff unit. It advises the president or one of his principle subordinates on matters pertaining to the establishment and maintenance of the optimum organization structure for present and future needs, and related policies dealing with executive staffing, compensation, and assignment. Its primary function, as indicated by its title, is planning. It has broad authorities to initiate planning and to develop plans, but final approval of the plans is reserved for the line executive.

THE PLANNING ROLES OF MAJOR DEPARTMENTS—SUMMARY

We have discussed examples of three kinds of departments. One of these was a line department, sales. The second was a functional department, personnel. The third was the staff department of organization planning. We found in each case these department heads performed planning activities necessary to the internal functioning of their departments. That

[23] Ernest Dale, *Planning and Developing the Company Organization Structure*, Research Report No. 20 (New York: American Management Association, Inc., 1952), p. 205.

is, they planned the assignment of personnel, the compensation of subordinates, and the acquisition of materials or supplies, *within* their respective departments. To the extent that each of these, in his role as the highest line executive within his own department, delegated planning authorities to his subordinates,

he was allowed to concentrate upon his external planning relationships with superiors and other departments

the plans he retained for his own action tended to be more significant, complex and comprehensive, and received closer attention.

In addition to this role as the highest-level planner for purely intra-departmental planning, these men each had other roles. One of these was that of advisor to superior executives. For the staff man, the organization planning director, this was his *primary* role. He was appointed to serve in this very capacity, while the sales and personnel heads were hired primarily as "doers" rather than advisors. This in no way diminishes the importance of their counselling roles, for these roles as advisors to superior executives can be extremely significant. It does indicate an emphasis on the kinds of activity they engage in.

The extent to which the department head acts as an advisor to his superior is a function of the degree of subordinate participation desired by the superior, the purpose for which the department was formed, the confidence the superior has in the department head, the knowledge and competence of the superior in the subject matter in question, and the nature of the plans under consideration.

The department head takes on a more active role as advisor to his superior to the extent that:

the plans are complex and detailed

the superior's own knowledge of the subject area is limited;

the department's raison d'etre is advisory

his superior values subordinate participation and has confidence in the judgment of his subordinates.

Another role shared by these three executives was that of a participant in the development of company-wide plans on a group basis. In such a case the department head might have acted, in concert, as the final authority in planning, approving the final plan; or he might have acted, in concert, as an advisor. In the former case, the staff man, who was purely advisory in his "regular" position, took on decision-making authority as a member of the group.

To the extent that the department heads cooperate in the making of company-wide plans on a group basis, as decision-makers or as advisors,

the plans will incorporate more varied points of view

the plans will receive greater acceptance when implementation begins
the plans will tend to be significant and comprehensive
dangers of compromise, time consumption, and shared responsibility arise.

Still another role shared by line, staff, and functional executives is that of information source and advisor to other departments. Each of them, to perform optimally, feeds information and advice to other organizational units so that these other units can use that information in their planning, thus integrating their efforts. In this role, the personnel department (that is, the functional department), plays the primary part. This department is formed for the specific purpose of guiding the actions of other departments relative to personnel matters. It accomplishes this in two ways—through the use of functional authority (issuing "orders") and through giving of advice and exercising influence. As indicated earlier, this department (and other similar departments) often functions in such a manner that its role as advisor is more prominent than its role as a source of authoritative communications.

The staff department, organization planning, is primarily oriented upward to superiors. It may and does advise subunits in the enterprise, but much, if not most, of its advice and counsel is directed to a superior executive. The line executive acts as an information source and advisor to other departments, but his primary orientation also is upward to his superiors and downward to subordinates within his own department.

To the extent that each department head acts as an information source and advisor to other departments,

coordination of departmental planning is facilitated
conflicts and disparities in planning will be ironed out at lower organizational levels
formal communications channels become less clear and informal channels take on added significance (see Chapter 10)
persuasion becomes more dominant and authority less dominant in the planning process (see Chapter 11).

We have seen that authority for marketing planning tends to be held relatively high in the organization; that where it is given to the department head, he tends to reserve final judgment on the plans for himself. Personnel planning activities tend to be performed a little lower in the organization. That is, subordinate personnel executives perform more steps in the planning process, and tend to have more opportunities for final approval of plans than their counterparts in the sales department. Organization planning is characterized by a high degree of initiative in planning, by having most of the planning steps performed in the department, but by final approval for plans being reserved to superior executives.

8

THE ROLE OF COMMITTEES

COMMITTEES PLAY SUCH AN IMportant role in business planning that their study is necessary to a full understanding of the planning process. Business planning is performed in many different group situations. The board of directors is a formally constituted committee and, of course, plays a major part in planning. Planning takes place in other formally designated committees formed under the authorities of the board or the president. But much company planning is done among other groups not formally organized. Planning takes place among an informal group of executives over coffee or on the commuter train. Planning is done in hastily called meetings between a superior and his subordinates. It is performed in task forces or among project personnel. Anywhere that people come together for the purpose of devising a course of action for the future, planning takes place.

In this chapter, we are concerned with joint action taken in the planning process, actions arrived at through group delibera-

tion. We will speak of formally constituted committees, but much of what we say will pertain in large measure to other groups as well, both formal and informal. The discussion is oriented toward committees that are intended to function over some reasonably significant period of time, i.e., a week, a month, or years, rather than an hour or a day, but applies also to groups established for shorter periods.

Our purpose would not be served by a lengthy discussion of similarities and dissimilarities of committees to other kinds of groups in a business enterprise. It might be useful, however, to distinguish between groups that have been formally established for a specified purpose and informal groups. Formal committees are distinguished by (1) being formed under the authorities granted some executive, (2) being responsible to some specific executive of the firm, (3) having a place in the organization chart and the organization manual, and (4) having articulated, even though imprecise, purposes. Informal groups tend to lack these characteristics.

It is also useful to distinguish between other informal groups and what we will here call informal committees. Informal committees are distinguished by (1) lack of appointment by an authorized executive of the firm and lack of assignment of specific duties; (2) spontaneous coming-together of persons who share a perceived need and feel that group action is helpful in fulfilling that need; (3) having relatively specific purposes—even though such purposes remain implicit and unarticulated, such committees do not arise without objectives; (4) being voluntary, although someone may be coerced into participating in the group; (5) being task-oriented—they are formed to get something done; and (6) having their tasks intended to further the organizational objectives rather than merely the objectives of the individual members or the informal committee itself.

These characteristics help to distinguish the informal committee from other social groupings usually found in business enterprises such as primary groups, which develop as a result of continuing face-to-face contacts, and cliques, which develop from commonly held feelings of opposition and antagonism.[1] Like formal groups, informal committees may be temporary or continuing, depending upon the purposes which brought the members together.

Much important planning takes place in informal committees. Their role depends on the extent to which the company has established formal groups to handle planning problems and on the powers given these formal groups. To illustrate this point, consider the case of an oil company which has established a formal budget committee. However, the president, the budget director, and the treasurer often act as an undesignated informal

[1] See Robert Dubin, *The World of Work* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1958), pp. 99-105.

committee to make plans which are subsequently brought to the budget committee for approval. Since the president and the treasurer have already approved the plans and since they are both superior to the members of the budget committee, little questioning or discussion of the proposals takes place in committee meetings. The committee acts as a rubber stamp. In this company, it is the informal committee that does the real planning, that makes the real decisions. Similar situations are found in many companies, and informal committees play some role in nearly all business firms.

TYPES OF COMMITTEES IN PLANNING

Planning is the major function of most committees. Some committees are established specifically to develop plans, e.g., the organization planning committee. Even when they are established for other purposes (coordination, control), committees engage themselves in important planning activities. They play different roles in planning, depending upon the purposes for which they have been established.

The control committee[2]

In this case the committee is, in effect, a plural executive. It has the full power to make decisions that result directly in line action, then see that these decisions are carried out. Such a committee might approve the undertaking of planning action by some subordinate person or group, or it might decide to embark upon the planning action, then perform the planning itself. It could be the source for final approval of plans developed by someone else, or for plans developed within the committee itself. The committee acts in lieu of a single executive and has all the authorities that might be vested in a single position. The executive committee oftentimes is an example of this kind of committee, as is the board of directors.

Committees of this sort could perform all of the steps in the planning process from the determination of need to the approval of the final plan. They are particularly likely to be concerned with approving the proposal to develop a plan, organizing the planning staff and assigning responsibilities, and approving the final plan. As indicated, on other occasions such a committee might do the planning itself, going through all of the steps in the planning process. This kind of committee is used in planning especially where the plans are comprehensive and significant. Its member-

[2] The discussion of the first four types of committees described in this chapter is based on a classification by Claude S. George, Jr., in *Management in Industry* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1959), p. 60.

ship is usually made up of line executives and the major functional or staff officers of the company.

Coordination and discussion committee

This type of committee discusses problems in order to give the executive more reliable information upon which to base his decisions. It also keeps all of its members informed of actions taken or contemplated so that they can dovetail their own activities with those of other organizational units. The committee is advisory in nature. The executive makes the decisions after receiving its recommendations. Generally, the committee will not carry out the decisions once they have been made by the executive.

Such committees, then, may serve to discuss the merits of a plan or alternate plans that have been submitted to the executive for approval. They are not characterized by investigation and research, but rather by discussion and analysis of information that has been submitted to them for their recommendations, and by the exchange of information affecting the various members' operations. They do, of course, frequently seek information in addition to that submitted to them, but they are not characterized as fact-gathering mechanisms.

After weighing a proposal, they seek to integrate any activities that might be called for by their respective departments. This coordination would be carried on by each member, not in his role as a committee member, but in his position as a member of a line or staff unit in the organization. If these committees have coordination as a major goal rather than as a mere by-product to their discussions and recommendatory activities, they will tend to be staffed by persons who hold some line responsibilities in their departments. This would be true even of staff persons serving on the committee; such persons would tend to possess line authority *within* the staff unit of which they were a part.

These committees would most likely not be involved in many of the steps in the planning process. They take part in the testing of a plan, and they might evaluate the data incorporated in a plan once it has been devised.

Investigatory and advisory committee

This committee is established for purposes of investigation and research; then it advises the executive of the results of its findings. The executive retains the power to act. Since it has as a major function the gathering of information, it most usually is given subordinate clerical and research personnel whose duty it is to collect data for the committee. The committee itself gathers information in cases where the committee con-

ducts hearings or interviews. It is evident, then, that such committees participate in the fact-gathering stage of planning. They take part in all of the steps in the planning process with two exceptions. These two exceptions are the approval to undertake planning and the approval of the final plan. These are decisions that will result directly in line action and are reserved for the executive to whom the committee is advisory. All of the other steps can be a part of the investigatory and advisory activities of the committee.

Dissemination and education committee

This type of committee is not established for purposes of decision-making, advising, investigating or analyzing, but rather for the specific purpose of getting people informed. Such information may or may not result directly in coordination; presumably it would do so ultimately. Such a committee would not be used in the planning process except to elicit cooperation from company units in the data gathering stage and from those persons who will have to carry out the plan. If the purpose is the coordination of the various aspects of the plan, then the committee ought more logically to be typed in the second category listed above.

Judicial committee

This type of committee exists for the purpose of resolving conflict. Such conflict might be between persons or between demands on the company's resources, or conflict between a proposed action and company policy. Actually, such a committee must fall into one of the categories previously mentioned here. Either it has the right to make final decisions, and thus falls into category one, or its judicial decisions are only of an advisory nature, in which case it is in category three. Nonetheless, the nature of this committee is sufficiently different from the other types to warrant separation from them.

The grievance committee is perhaps the best example of a judiciary-type committee. The budget committee can sometimes be classified in this way when it functions to review proposed expenditures in the light of existing financial policies. A committee of this type might review a proposal to utilize only one source of supply whereas the company has a long-standing policy of requiring two or more sources for all major raw materials.

Since these committees are judicial in nature, they would not take part in most of the steps in the planning process—determination of need, organizing the planning staff, and establishing contact with cooperating units. They might, as indicated above, review the final plan to judge its merits relative to existing company policy.

COMMITTEES AND THE DIMENSIONS OF A PLAN

Significance

Committees deal with plans of differing significance. Where they deal with plans of lesser significance, it is usually because the nature of the problem itself dictates the use of several minds rather than one—for example, where the committee's function is judicial in nature. Thus suggestion system awards are made under a standing plan developed and executed by a committee, even though the planning itself may not be of critical significance to the welfare and survival of the firm. But because committees are expensive and time-consuming administrative mechanisms their use tends generally to be restricted to participating in planning where the plans are of relatively great importance. As plans increase in significance, there is greater likelihood that group judgment will be used and that it will be used at more points in the planning process. Those plans that have the utmost importance to the future of the enterprise will very often have group judgment exercised at the most critical point in the process, approval of the final plan. Such plans as company goals and objectives, corporate policy, and total enterprise budgets are usually formulated by committees.

Comprehensiveness

A plan dealing only with one segment of an organization can have indirect ramifications of critical importance. On the other hand, plans that are comprehensive do tend to have greater significance than those that are narrow in scope. Comprehensive plans, then, tend to be significant and therefore to be characterized by group action. Given two plans of equal significance, the plan with the greater comprehensiveness is more likely to have group action in the planning process than is the plan characterized by a lesser degree of comprehensiveness. This comes about for several reasons: necessity for cooperation in data gathering in many units, necessity for the integration of many points of view, a desire to promote cooperation in the implementation of the plan, and so on.

Complexity

Plans of a complex dimension will call for group action where the complexity is of such a nature as to require a variety of background knowledge, where the components of a plan are interdependent and also lend themselves to a division of effort. Complexity does not necessarily dictate the use of committees, but there is a broad tendency for complex plans to be handled by committee.

As the number of parts (components) of a plan increases and as the cross-influences and interdependencies increase among these various parts, it becomes increasingly difficult for a single mind to understand all of the relationships and to retain all of the knowledge desirable for decision-making. Group action will be called for in the tying together of the separate components. If there are relatively few components, and they are relatively independent from one another, a single person might handle the entire plan, or individual persons might each handle a single component, without the necessity of concerted group action. Also, a larger number of variables affecting the decisions within each part of the plan adds to its complexity and makes it more likely that several persons rather than one will do the planning. For example, as the number of variables affecting the advertising component of a broader plan to market a new product increases, it may become necessary to assign that particular component to one person while another handles the market evaluation, another the realignment of sales territories, and so on. To the extent that there are few variables affecting the decisions in each of these components, the plan is less complex and it becomes easier for a single individual to handle.

Plans are more or less complex to the extent that there are pre-existing guides to help in choosing among alternatives. The existence of policies, rules, and procedures helps to narrow the area for decision-making, and generally makes it easier for a single person rather than a group to do the planning.

Again, it should be borne in mind that these are only broad tendencies and that complexity does not necessarily dictate the use of committees in planning.

Time

The time dimension is related to the use of committees in two important ways. First, there is a distinct correlation between the time period covered by the plan and the use of groups in developing the plan. Long-range planning is a very fruitful ground for the use of committees. This is because long-range planning must answer some extremely important questions: "What kind of company do we want to be? How large? What kinds of products? In what areas?" These questions, because of their very broad nature and the variety of knowledge and background necessary to their solution, are best handled by groups.

Time is important to group planning in another way. To the extent that there is little time available for the development of a plan, and to the extent that there can be no time lag between the plan's development and its execution, we tend to find planning being done by individuals. Under

these circumstances, when groups enter the planning process, they tend to be small groups and they tend to perform fewer of the steps in planning than would be the case if more time were available.

Frequency

The frequency dimension of plans is related to group planning in the sense that plans which are to be used over and over again, i.e., standing plans, tend to be given the greater deliberation that goes with group effort. This is not necessarily so, of course, since a single-use plan can be significant, comprehensive, and complex, as in the case of a plan to build a new plant or launch a new product. Treating significance, complexity and comprehensiveness as constants, though, the more often a given plan is to be used, the more likely it is that group effort will be utilized in the planning process.

Confidential nature

The greater the need to hold plans in confidence, the lesser will be the role played by committees in the development of the plans. Fewer committees will be used, they will enter the planning process at fewer points, and the committees, where used, will be made up of fewer members.

Other dimensions

The other dimensions of a plan will also have an effect upon the use or nonuse of committees in the planning process. We will not discuss them at length except to say that plans developed by group action tend to be relatively specific and complete, and to be formal and have formal authorization. However, plans developed by individuals can and often do have greater degrees of these dimensions than plans developed through group action.

The use of committees in the planning process is determined in part by the dimensions of the plans under consideration. In turn, the dimensions of the plans are determined in part by whether the plans are developed by individuals or committees.

The greater the degree of complexity, significance, comprehensiveness, and frequency of use of a plan, and the greater the time period covered by the plan,

the more likely that committee action will be used in planning

the greater the number of steps in the planning process that will be carried out by committees

the more likely that final approval of the resulting plan will be given by a group rather than an individual.

AUTHORITIES EXERCISED BY COMMITTEES IN PLANNING

Like any other staff unit, committees may act in a purely advisory capacity. This is their traditional role—to investigate, analyze, formulate, and recommend. They frequently are given other authorities. In many cases, committees have the right to make decisions—to adopt the plans as well as to formulate them. Thus, their authority extends beyond merely advising. Also, they may have authority to administer the plans once they have been adopted. In such a case, committees truly are "plural executives," engaging in organizing, planning, directing, controlling and sometimes even staffing of business activities. Committees may have functional authority (the right to determine methods, procedures, and policies for a given type of activity throughout the firm). They may have line authority exemplified by the right to hire and fire (this usually is restricted to top-level committees in their selection and discharge of the company's higher executives). They have staff authority, of course, since their most usual role is one of advising. Higher level committees tend to have decision-making powers. Lower level committees usually are restricted to giving advice once they have performed their investigatory and analytical functions.

Committees often operate inefficiently because necessary authorities have not been granted to them, or to their members. Committees are established to recommend long-range plans for the company, for example. They are composed of middle-level executives. Their activities call for access to the company's plans for future finances, plans about executive manpower assignments and other information, such access being denied to committees or granted to them only partially. Clearly, committees will fall short of achieving their purpose under such circumstances.

In this example, a committee, as an entity, has been denied the powers necessary to accomplish its objectives. In contrast to this, sometimes the individual members of the committee are not given sufficient authority to allow them to perform well as members of the group. This often occurs in committees made up of administrators from several organization levels. Where vice-presidents, department heads and section heads make up a committee, the chances are great that the senior executives will have the authority to make whatever decisions are necessary in the committee's work. But the lower-level members of the committee too often cannot make such decisions and must seek their line superior's approval before taking action. This, of course, slows up the group's accomplishments as time and effort are expended in informing the superiors so that they in turn can grant or withhold their approval.

A similar problem arises when a committee member cannot attend com-

mittee meetings and sends a subordinate as a substitute. The substitute ordinarily is not as free to make decisions as is the superior he represents. As a result, he finds himself unable to take decisive action, being required to consult with his superior. This problem is especially prevalent because committees are and should be established only to handle important problems which warrant the attention of several persons. Important problems are those the executive likes to decide for himself; he does not want a subordinate who represents him to make binding decisions in his stead. Since higher executives are very likely to serve on several or many committees and because time pressures build up, they succumb to the temptation to absent themselves from committee deliberations. To keep themselves informed and to have their interests represented at the meeting, they send substitutes, and the time consumption and indecision described above takes place.

The kind and extent of authority granted to a committee will of course depend upon the purpose for which the committee was established. If it is to act in the place of an executive, that is, to function as a plural executive, it must be given authorities commensurate with those the executive would have. If its purpose is for informing and educating its members, it need have no decision-making authorities. If its purpose is investigatory and analytical, it must have powers to gain access to the necessary information.

The planning authorities granted to committees are a function of the purpose for which the committee was established, the significance of the decisions, and the membership of the committee. Greater authorities—up to and including approval of the final plan—tend to be granted to groups as the significance of the plan increases, committee membership is drawn from higher management, and the committee is established to act as a "plural executive."

To the extent that significant planning authorities are delegated to committees, the committee will participate in more of the steps of planning, and the members will be more highly motivated in their planning activities.

PROS AND CONS OF COMMITTEE USE

The advantages and limitations of the use of committees are subjects covered very adequately in a number of published works.[3] Rather than discuss these at length, we will merely cite what are the advantages and shortcomings of committees. The advantages include the following:

[3] See William Newman, *Administrative Action* (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1951), and H. Koontz and C. O'Donnell, *Principles of Management* (New York: McGraw-Hill Book Co., Inc., 1959).

1. They are useful media for the coordination of various activities in the company.
2. They are helpful in keeping their membership informed and in transmitting information to others through their membership.
3. Decisions coming from committees are preferable to individual decision-making in that use is made of the best judgments of several minds rather than one.
4. More diverse backgrounds and knowledge can be brought to bear on a given problem.
5. They give their membership a sense of participation, thus tending to garner support for the implementation of committee decisions.
6. They allow a superior to delegate some authority and responsibility without granting excessive powers to any one person.
7. They can be used to delay or avoid taking action. (This point may be considered as a disadvantage, but most practicing executives will willingly grant the point that some delays and avoidances are indeed justifiable and that the appointment of committees is an effective way of bringing about such delay.)
8. They are good training grounds for junior executives.

Disadvantages of the use of committees include the following:

1. They are slow and expensive. (There is much truth in the saying that committees keep minutes and spend hours.)
2. They tend to arrive at compromise decisions. While such compromises are sometimes the best solution, committees infrequently are capable of taking imaginative, farsighted and risky paths.
3. Responsibility is shared. No one person feels that he can be held responsible for the actions of the group.
4. Committees may be dominated by one or a few individuals. If compromises do not result, the reason often lies in strong leadership which dominates the thinking and decisions of the group.
5. Committees often are used for inappropriate purposes—direct supervision of employees' actions, for example.

ORGANIZATIONAL LOCATION OF COMMITTEES

Committees may be found anywhere in the organizational structure. They exist at the highest levels: the board of directors, the executive committee, the production and marketing committees, finance and budget committees. They may exist at intermediate levels: product development committees, wage review committees, departmental budget committees, and public relations. Lower level committees include such groups as: safety, shop regulations, shop grievances, and suggestion system awards.

As one approaches the bottom of an organizational structure, the administrator spends less time in planning and more time in the implementation of plans developed by others. In approaching the top of an organization's structure, the higher one goes the greater is the proportion of time the executive spends on future planning. This is also true of committees; lower-level committees spend relatively less time in preparation for the future, relatively more time in dealing with the problems of today. Top-level committees, on the other hand, spend a great deal of their time in planning. An executive of a West Coast lumber firm recently kept a tabulation of the actions of the board of directors and concluded that fully 40 per cent of the decisions reached by that body would not prove themselves to be right or wrong during the lifetimes of the members of the board.

EFFECTIVENESS OF COMMITTEES IN PLANNING

According to a survey of 20 companies by the American Management Association, planning was performed more effectively by committees than by individuals in only 20 per cent of the cases.[4] The results of this survey are reproduced in the following table:

TABLE 8-1

PERCENTAGE OF CASES IN WHICH MANAGEMENT FUNCTIONS CAN BE EXERCISED BY A UNIT OF ORGANIZATION IN COMMITTEE FORM

Management Function	A *Can be exercised by committee effectively*	B *Same as A, but can be exercised more effectively by individual*	C *Individual initiative essential; may be supplemented by committee action*	D *Individual action essential; committee ineffective*
Planning	20	20	25	35
Control	25	20	25	30
Formulating objectives	35	35	10	20
Organization	5	25	20	50
Jurisdictional questions	90	10	—	—
Leadership	—	—	10	90
Administration	20	25	25	30
Execution	10	15	10	65
Innovation	30	20	20	30
Communication	20	15	35	30
Advice	15	25	35	25
Decision-making	10	30	10	50

[4] Ernest Dale, *Planning and Developing the Company Organization Structure*, Research Report No. 20 (New York: American Management Association, Inc., 1952), p. 92.

be in the form of committees or not. Since the group has expended time and effort in evaluating the information gathered and drawing up alternatives, and since this group probably knows more about the subject than any other persons in the company, it is only logical that its recommendations be sought.

Final approval of plan

Final approval of a plan (Step 7) is often held to be a line-executive decision-making responsibility. The American Management Association survey previously cited showed that committees were at their weakest in decision-making. This is typically the view of practicing administrators, who are impressed with committee proclivities for procrastination and compromise, slowness and divided responsibility. Theorists and some practitioners, on the other hand, point out that really effective carrying out of the decision is a function of the implementer's participation in the decision-making. (Committee action is one form of participation, but there are others.) Proponents of the former view hold that committees are very useful in analyzing and evaluating information and in preparation of the proposals, but they generally fall short of the mark when acting to assign final approval or disapproval to their proposals or the proposals of subordinate persons or groups.

Practitioners join theoreticians, however, in granting that group decision-making can be appropriate at the company's top level. Company-wide policy making generally is fruitful ground for the "plural executive" type of decision-making. On unprogrammed, long-range, slowly deliberated, company-wide planning, the need for several minds becomes evident. Although such groups often merely advise the president, in many other instances they are given the right to make binding decisions. Among the more publicized of the latter type is the du Pont Company's executive committee.[7] This is a body composed of the president and nine vice-presidents who are also members of the full board of directors. The executive committee has direct operating responsibility over 10 manufacturing and 12 staff divisions. The division directors are appointed by and responsible to the executive committee. The committee approves all major plans of both manufacturing and staff divisions. It is in shorter-term, less inclusive operating decisions that committees manifest their greatest shortcomings. They leave much to be desired, for example, in deciding whether to approve plans for the relocation of the shipping department or changing salesmen's quotas. In spite of these shortcomings, there has been a greatly increased dependence upon group decisions even

[7] See William H. Mylander, "Management by Executive Committee," *Harvard Business Review*, May-June, 1955, p. 51.

at the middle and lower management levels. These may not be group decisions in the extreme jury sense where there is no superior to veto the decision, but, as one scholar has put it, "all that is left of the old entirely unilateral decision is the official skeleton of individual responsibility." In theory, the executive has made the decision and must be held responsible for it, but in practice the decision is often made by a group.

Where does this leave us? Generalizations are difficult, but we have indicated that high-level plan approval—including the final approval of the plans—probably is most effectively done by groups. At lower levels and on shorter-term plans of lesser significance, the speed, decisiveness, and pinpoint responsibility of individual judgment often outweighs the advantages of group decision-making. Participation is likely to enhance the success of the decision's execution, but participation may take many forms and need not include approval of the final plan.

COMMITTEES IN COMMUNICATION AND PERSUASION

In subsequent chapters we will deal specifically with the role of communication theory and persuasion theory in planning. There we will find the committee plays a prominent part in the communicating and persuading that are necessary to development and implementation of a plan.[8] We will not, therefore, discuss this subject at this point. Let it suffice to point out here that, as we have indicated, some committees are formed for the specific purpose of communicating and persuading. As the likelihood of resistance increases, it is frequently useful to invite more persons to participate in developing the plans. Representation from affected groups helps to allay their misgivings about pending changes. Likewise, difficulty of communicating about a certain plan may dictate the establishment of a group for the purpose of explaining the need for a plan, its content, and the possible results.

EXAMPLE OF COMMITTEES AS PLANNING DEVICES

The example cited below serves to point up the important role committees play in the planning of a business enterprise. It deals with the use of committees in the research and development that is necessary to create a saleable—hopefully profitable—product from what was in the beginning an idea.

[8] For an interesting research work which bears out the hypothesis that participation enhances the successful carrying out of a decision, see Victor H. Vroom, *Some Personality Determinants of the Effects of Participation* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1960).

In this firm, the S. C. Johnson & Son, Inc.,[9] a "new products department" has been created, reporting to the executive vice-president. Two kinds of groups or committees have been established whose principal functions are to promote the development of new products in all departments. From the descriptions below it can be seen that these committees are very heavily occupied with planning. It can also be seen that the committees do much more: they coordinate; they expedite; they direct, and they control.

PLAN OF TOP ORGANIZATION, S. C. JOHNSON & SON, INC.

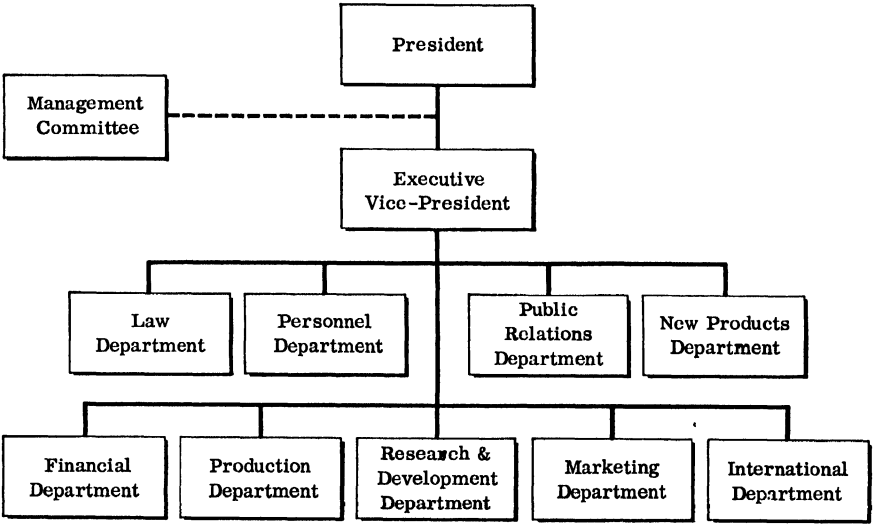


Fig. 8-1.

At S. C. Johnson & Son, Inc., two kinds of "task forces" report to the new products director. These are the principle vehicles for carrying forward new product activities in all departments:

1. *Sponsor groups* formulate a proposal and guide its development. Each group is formally charged, after the screening phase, with responsibility for successful development into a realistic product. The composition of the group is tailored to fit the specific product and its characteristics. Marketing research and development, and the new products department are always represented; in addition, there may be one or two individuals drawn from other departments. To illustrate:

[9] The following charts and quotations are from S. C. Johnson and C. Jones, "How to Organize for New Products," *Harvard Business Review*, May-June, 1957, pp. 56-58.

At the present time, there are nearly 40 sponsor groups, with a total of over 150 members from all company departments, each vigorously pushing forward the development of its product. Each group is guided and assisted by the new products department, which coordinates the activities through a member of its own staff assigned to each sponsor group.

The sponsor group is a key provision in the organization of this new products department. It is the device through which the department discharges its responsibilities in the proposal and development phases. It provides minimum interference with the established departments and maximum reliance on their existing personnel and services. It represents, in effect, formal recognition of relationships among people who either do or should work together in any successful product's development.

2. *Product committees* are formally organized with regular meetings and agenda, and have a large membership drawn from many departments—but the nucleus of each committee is the sponsor group that developed the product. The product committee is responsible for carrying a product, once developed, through to full-scale commercialization. At S. C. Johnson & Son, Inc., where test marketing is of major importance, the committee chairman is usually a product or sales manager.

For example, product idea #620 (a lightweight wax applier) is now in a product committee with this membership:

The staff designer from the development department.

A product manager from the advertising and merchandising department.

A project manager from the marketing research department.

An account executive from the advertising agency.

A buyer from the purchasing department.

An industrial engineer from the industrial engineering department.

The technical coordinator from the new products department.

The minutes of one week's conferences show that the product committee made these decisions:

Ordered production molds.

Recommended advertising copy and strategy (for top-management approval).

Established delivery schedule with suppliers.

Programmed additional product-in-use tests.

The committee also coordinates all activities of product introduction to the point where line responsibility for the new product has been permanently established and is operating smoothly.

The importance of these task forces is attested by the fact that the phases of new product evolution have come in practice to be called the sponsor group phase and the product committee phase.

Figure 8-3 shows the prominent role played by groups in the planning that takes place before a product is produced, sold, and delivered. Note that the groups serve under different names—teams, panels, groups, and

NEW PRODUCTS DEPARTMENT, S. C. JOHNSON & SON, INC.

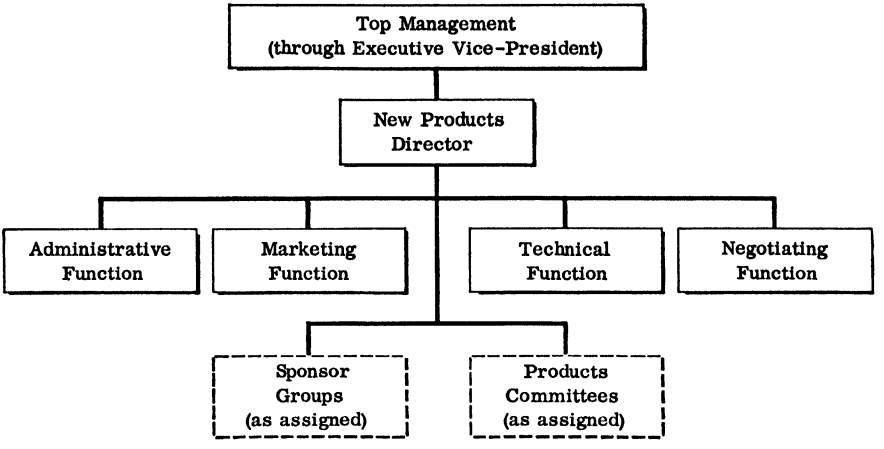


Fig. 8-2.

committees. This differing nomenclature indicates differing emphasis in their activities, but for practical purposes they might all be called committees.

MAKING COMMITTEE PLANNING MORE EFFECTIVE

We have said that committees are very effective in some types and phases of planning and that they are less useful in other types. There are some steps management can take to make them more effective in whatever endeavors they undertake. We are specifically concerned with their efficacy in planning and will so address ourselves, but these steps may also make committees more productive in other kinds of activities. Many of these actions have been touched upon earlier in this chapter, but the benefits that may accrue from them are so great that they deserve specific attention.

Give the committee proper assignments

Committees may be used and misused. Too frequently, they are misused by giving them inappropriate duties to perform. We have already indicated that there are many activities for which they are poorly suited: fact gathering, research, some steps in forecasting, making quick decisions, embarking on imaginative and far-flung paths, or supervising the carrying out of plans. For these purposes, it is better to utilize individual talents. Committees may very well perform these functions, but they do

COMMUNICATIONS FOR EFFECTIVE NEW-PRODUCT EVOLUTION

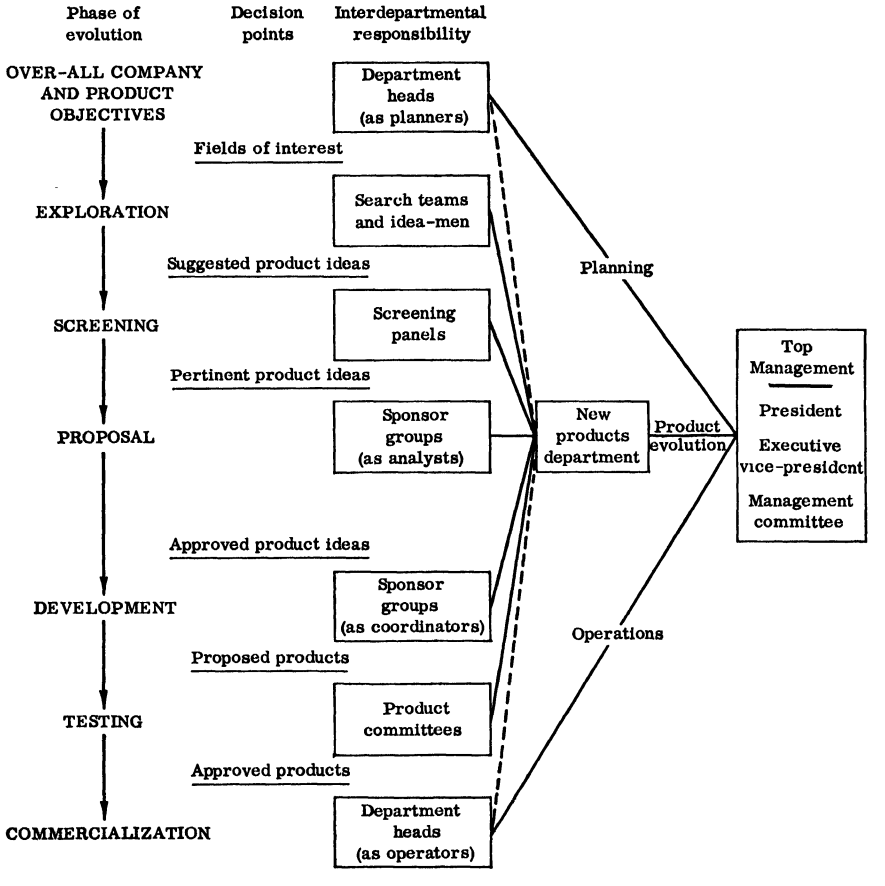


Fig. 8-3.

not often perform in a manner equal or superior to that of an individual person or persons assigned like tasks. They should be assigned only to those kinds of activities where they have proven their worth—where group judgment is essential, where different kinds of knowledge must be brought together to solve a problem, where major issues are at stake. Committees are valuable planning devices, but only if their strengths and weaknesses are recognized.

Defining the assigned duties

Having chosen appropriate duties for assignment to a committee, there remains the problem of identifying and defining the exact nature of

the committee's responsibility. One of the authors recently spent an entire morning in a committee meeting where the sole topic for discussion was the purpose for which the committee had been established; no one knew, not even the chairman. This seems extremely inadroit administratively, yet it happens with surprising frequency. More often, the committee has some idea of its intended function and only later runs into snags that cause it to question just how far or how deep its responsibilities extend. There are many committees whose functions are so broad as to preclude any great delimitation. Policy committees, for example, will have their duties defined only in the most general terms. Do their responsibilities end with company-wide policies, or do they concern themselves also with establishment or review of departmental policies? What is a policy? These questions often remain unanswered and are worked out over a period of time; the committee finds that it deals with some problems, not with others. A sort of common law doctrine evolves, assigning some subjects for policy committee consideration, others to some other organizational unit for consideration. It is much easier to do this with standing committees than with temporary ones which are abolished before there has been a great deal of experience upon which to base the objectives.

Nondefinition of functions of committees seems to work much better at the company's upper levels where the executives serving on them are able to work out their roles in relation to other units in the enterprise. Inability to define precisely the exact nature and extent of top-level committees' functions should not deter management from defining their responsibilities as precisely as possible. For lower-level committees this definition becomes even more desirable.

If the committee's objectives are defined inexactly by management, they must be worked out by the committee itself. While this definition is obviously of great importance, it is most difficult to come by. Clarification of objectives is complicated by differing perceptions brought to the group by its members. Each person on the committee comes to the group with *his* impression of its mission. Rarely are these perceptions identical; often they are conflicting. Take, for example, a seemingly precise and unambiguous directive to "develop a training program for plant supervisors." For some this means role playing, case problems, university management seminars; for others it means lectures by superior managers. For some it means complete development of the program from its inception until the last foreman has undergone training. For others it means only the development of a skeleton outline for a plan of action to be undertaken by others. "Supervisors" is interpreted by some to mean those persons who carry that title; for others the word is used generically, meaning lower-management personnel. "How much money do we have at our disposal?", "Does the boss want a one-shot program, or will he back a

continuing program for supervisory development?" are questions that will be asked. The once unambiguous statement of objective has now become a fuzzy-worded directive from above, nebulous, confusing and irritating.

In addition, there are frequently many unverbalized objectives brought to the group.[10] Sometimes these are in the form of individual goals: committee members support decisions that will make them look good, will please their bosses and fulfill their particular needs—even though such action would not contribute to the fulfillment of the committee's objectives and might in fact detract from the achievement of those objectives.

Sometimes these unverbalized objectives are in the form of subgroup goals. (See Chapter 11.) The purchasing department would like control over inventory; the sales department would like to be freed from procedures laid down by the personnel department. Like personal goals, subgroup goals may complement the committee goals or conflict with them.

Personal and subgroup goals can probably be dealt with more effectively if they are expressed. At least that way the participants have an understanding of the problems facing them in defining objectives for the group. Whether or not to express such noninstitutional goals is a question each person and subgroup must answer for itself. All the group leader and participants can do is to create an atmosphere where such expression is perceived as desirable.

Leavitt prescribes the following formula for more effective group goal-definition:

> 1) have every man in the group know where the group is going; 2) have every man in the group either want to go where the group is going or say where he wants to get off; 3) if there are people who want to get off early, either change the objectives so as these people can go along or let them off and start over; and 4) take another look every once in a while to see whether objectives need to be changed or modified.[11]

Selecting proper membership

Membership on a committee will be determined by the purposes for which the group is formed. A committee for evaluating factory jobs will include persons who have an intimate knowledge of shop conditions and jobs and will not very likely call for a person with a background in finance. Likewise, a committee formed to examine methods of financing future plant expansion will not likely include shop foremen.

When a committee is formed, it is usual that a few positions more or

[10] See Harold J. Leavitt, *Managerial Psychology* (Chicago: The University of Chicago Press, 1958), p. 218.

[11] *Ibid.*, p. 220.

less clearly indicate the type of person that must fill them. The job specifications are clear. Usually, though, there are also some positions that do not call quite as clearly for a specific type of individual. Here the decision becomes more difficult. A committee studying a make-or-buy problem, for example, would clearly call for the inclusion of the purchasing agent and a high production official. But beyond these the choice comes less easily. Should you include an accountant? A representative from sales? Engineering? These are matters of judgment and there are no rules to help us.

In determining the size of committees, we are similarly unaided by rules or principles. There is no optimum size for committees. Size should vary with purpose, but this is not very helpful. There are a few generalizations that might be made, however. Where the purpose of the committee is the coordination of various units of the organization, it makes sense that a representative from each of those units serve on the committee. If the purpose is informing and dissemination of information downward in the organization, this dictates a rather large membership drawn from many different departments or divisions. If the purpose is long-range planning, the membership must be drawn from top management, with relatively few members.

Although there are no hard and fast rules on selecting committee membership, some experimental research carried on at the Laboratory of Social Relations at Harvard University has led to some very tentative guides to more effective committee action.[12]

1. Committees ought not to be larger than seven members in the absence of fairly conclusive evidence that greater numbers are needed to provide for inclusiveness of points of view, sources of information, and so on. Groups larger than seven find greater difficulty in communication, bring a diversity of nongroup goals.

2. Committees as small as two or three are to be avoided if there is a serious problem of power conflict between members. Larger membership in this case allows for power balances to be established and compromises to be effected.

3. Recognition should be given to research findings which indicate that committees are not made up of a leader and several followers. Rather, there often arise two leaders who can be classed roughly into task leaders (idea men, those who concentrate on getting the work done) and social leaders (who serve to cement the group together, compromise conflicting views, develop group identification, and so on). An awareness of this dual leadership role allows for more appropriate selection of committee membership.

[12] See Talcott Parsons, Robert F. Bales, and Edward A. Shills, *Working Papers in the Theory of Action* (Glencoe, Ill.: Free Press, 1953). Note particularly Chapter 4.

4. Membership should be chosen from all portions of the participation continuum, from highly active members to those who participate moderately and to the relatively passive person. Competition in the group tends to crop up when the membership is made up only of highly active members. Committees composed only of relatively passive membership will likely suffer from a lack of ideas and from a want of initiative.

The committee members must be picked with cognizance of their status and the prestige they carry in the organization. A team of minor executives working out long-range plans for the enterprise would very likely fail in its purpose, one of the reasons being that superior officers would not take seriously nor accept as binding upon them any decisions or plans reached by the committee. The president of the firm can try to forestall this by throwing his weight and prestige behind the committee, but generally, where full acceptance and cooperation are essential, it is best to have persons on the committee who will help to elicit such responses throughout the company. This is true of all committees: the status of the members must be in keeping with the purpose of the committee.

Assigning proper authorities

Closely related to the status and prestige of its membership is the authority that is assigned to the committee and carried by its members. We have indicated that the committee should be assigned duties for which group judgment is appropriate. It must be assigned members in keeping with these duties, and it must be assigned authorities commensurate with these responsibilities. The committee itself will have certain authorities, and each member assigned to it will have certain authorities. Speaking first of the committee's powers, whatever they are they must be assigned specifically and then respected.

Committee authorities usually fall into either of two categories; they may make decisions that are binding and result directly in line action, or they merely advise an executive. In both cases, they have the right to investigate and then to be heard. That is, they must have access to places and information necessary to their work, and the fruits of their deliberations must be considered, even though they may in the end be rejected or modified. Recently, the top executive of an enterprise appointed a committee to advise him on the selection of a new department head. Then, after months of searching and deliberation by the committee, he informed them that he had found a new man himself.[13] If such experiences were to be widespread or to continue, committee membership would become a

[13] This prompted a committee member to state wistfully that he wished he were more like the offspring of a parrot who was crossbred with a tiger. It still looked like a bird, but when it talked, people listened.

mockery and the usefulness of groups to that firm's planning would be seriously compromised. Even where the committee is only advisory, its authorities, once assigned, must be respected. Where the committee has power to make line-action decisions, it must be left unhindered by reversals and vetoes from above.

The individual members of the committee must be assigned whatever authorities are necessary to function effectively within the group. Where each individual member must consistently seek out the views, support, and approval of his superior before the committee can take any significant action, committee efficiency is stultified.

Of course, the status of the members of the committee may very well give it powers far beyond those formally assigned to the committee. The authors witnessed the experience of one organization in which the executive committee, advisory to the top executive, advised him to resign. Against his will, he took the advice. In this case the "advisory" committee had been formally assigned authority which in no way suggested its real importance and power in the organization.

A committee member can be assigned authorities which circumvent or nullify those of his line superior. This may happen when a man is chosen to serve on a committee reporting to someone higher in the organization than his line superior. The result is a new line of communication which may bypass the line superior, a new loyalty to the committee chairman and the man to whom the committee reports—one which could in part replace old loyalties to the line superior. The committee member may know of management's plans before his superior, be more knowledgeable about conditions in other departments, or in other ways possess information embarrassing to his superior.

Proper assignment of authorities to committees and to members on the committees requires recognition of all of the pitfalls suggested above.

Choosing effective leadership

Groups require leaders, whether they be formal or informal. The leader's functions will depend upon those of the committee, but in general he is responsible for calling the meetings, preparing the agenda, leading the discussions (and all that this implies—promoting cooperation, compromise, and tolerance), coordinating activities of members and subgroups, directing activities of whatever staff help may be assigned to the committees, reporting to the designated superior executive, representing the committee on other committees, and bearing in large part responsibility for the successful operation of the committee.

The leader determines the *modus operandi* for the group. His behavior establishes the pattern. He may make it a "shirt-sleeve" committee, work-

ing informally over coffee in the cafeteria, or it may be a formal body governed by Robert's *Rules of Order*. He may play a neutral role or a highly partisan one. He may stimulate ideas through gentle leading and nondirection, or use his position to prod others to useful thought, or coerce others into agreement. He can encourage disagreement, or discourage it. He can encourage integration or compromise. Perhaps, he will do all of these things, depending upon the issues and the people and the time involved. There are no standard rules for successful committee leadership, and no rules for unfailingly choosing the right man to be the leader. Over a period of time enough experience may be gathered to predict with some degree of accuracy the chances of success for a particular executive. If he has had prior committee leaderships that have been successful, he may be a good gamble for future assignments. The behavioral sciences may in the future be able to prescribe desirable personality traits and to increase substantially the chances of successful leader selection. Some progress has been made in this direction (and also in the direction of prescribing complementary and supporting traits for committee members that help to promote committee effectiveness), but at this time the results are not sufficiently reliable to be very useful to the practicing administrator.

We do have, however, some evidence from the Harvard researches previously mentioned[14] that indicate it is an oversimplification to speak of *the* leader: the man who concentrates on the work to be done, providing ideas, pressuring for decisions and action. There are usually two leaders. One is the task leader. The other is the social leader. The social leader tends to be the best liked in the group. His function is to maintain unity in the group, to effect compromise, to assure individuals of their value as individuals and to the group, and to assuage some of the irritations that arise through the actions of the task leader.

Only infrequently will these two roles be filled by a single individual. If the leader originally arises informally, by means of group consent or election, he tends to lose some of his popularity in the conflict that is concommitant to getting the task accomplished. The leader may choose to sacrifice the task and retain his popularity, in which case a new task leader emerges, or he may choose to sacrifice his popularity and get the job done, in which case a different social leader arises. It is important for the formally designated leader to recognize the implications of this research. If the findings prove to be valid, it means that recognition must be given to the complementarity of these two roles: that both contribute significantly to the accomplishments and stability of the group; that neither is likely to be successful in the absence of the other, especially if

[14] Parsons, *et al., op. cit.*

the group is intended to function over any significant period of time. Ideally, of course, one person might fill both roles. In practice, the future might see committee leadership chosen with a view to providing both kinds of leadership, task and social, by appointing persons to the committee whose characteristics are complementary, who will work as a team within the larger group which is the committee itself.

Give the committee staff assistance

We stated earlier that committees were not very effective as research and data gathering devices. Implied in this statement was the idea that committees ought to be given enough assistance to allow for the gathering of data, and its preliminary interpretation. The committee serves very usefully as a reviewer and evaluator of this preliminary research work, but the research itself is better suited to individual efforts. For this reason it is important that committees be given whatever staff assistance is necessary. This seldom happens. Very often they are given no assistance at all, or the members are expected to use their own assistants and subordinates for this purpose, adding to their normal duties and assignments. At the higher levels in the company, staffs tend to be provided. At the lower levels the committees are often left to find whatever means they can for the performance of these functions. The absence of supporting staffs is one of the more important factors limiting committee effectiveness in American business firms.

Preplan the planning

Establishing the agenda and otherwise preparing for the meeting are functions of the committee chairman. There is much that can be done before the committee meets. First, of course, there is the determination of just what is to be discussed and in what order. There is the direction of whatever fact gathering activities are necessary. Then there is the problem of getting any necessary information or reports to the members for study before the meeting, and taking any steps that might promote their study of such data. There really is nothing distinctive about planning for committee planning activities. Such plans have the same dimensions, the same steps, as any other kinds of plans. There is one important qualification to this, however.

Caution must be exercised in planning for committee meetings. Preplanning can result in prepared positions for each participant, positions that bring ego-involvement, defensiveness, and concommitant lack of progress.[15] If preparation for committee meetings means *prejudging*, it may be advisable to minimize the preparation for such meetings. "Prepa-

[15] Leavitt, *op. cit.*, p. 223.

ration" need not result in prepared, inflexible positions, however. It can mean that each person is supplied with information that will allow him to make more useful decisions. It can mean that the leader has prepared a general plan for proceeding to a conclusion, not a predetermined conclusion. Preparation has its place, and it is an important place. But if a legitimate group decision is desired, preparation ought not to include the development of prepared positions from which to attack or defend.

Evaluate committee performance

Committee personnel should pause frequently to evaluate their own performance. Questions such as "What did we accomplish last meeting?", "Have we strayed from our purpose?", "Is our discussion leading us to some conclusion or is it tangential, or even irrelevant?" ought to be asked. Frequent pauses for critical examination of both progress and procedure help to further the goals of the group.

Management spends a reasonable amount of time and effort in evaluating the effectiveness of its executive personnel. It devotes ample amounts of its resources to evaluating the functioning of its various departments and divisions. It is only infrequently, however, that it devotes much time and attention to the inspection and weighing of committee performance. Not very often does management ask, "Did this committee accomplish its intended purpose?" "If so, how expeditiously?" "At what cost?" Valuable insights to committee effectiveness can be garnered through interviewing the person to whom the committee reports, the chairman of the group, and other members of the committee, as well as by looking at the results of their work. Efficiency is a ratio between inputs and outputs. In evaluating committee work, management ought to ask such questions as, "Could the committee have worked as well with fewer members?" "Could this work have been done as well or better by a single person?"

Dissolving the committee

When a committee's purpose has been fulfilled, it should be dissolved, with specific notice of the dissolution being given to the members and other interested persons. Very often this does not occur. When their work has finished, they just do not meet again. This leaves everyone hanging in mid-air. Subsequently, other committees are formed. Sometimes they cover some of the same subject matter. Questions are raised as to the status of new committees or other persons in the organization who deal with similar problems. Quick discharge of committees which have performed their task makes for cleaner, better defined lines of authority and responsibility, and makes subsequent committee work easier.

SUMMARY

Much important planning is done by committees, both formal and informal. Committees are formed for many purposes, but almost all of them engage in planning in some way. Some committees, like the organization planning committee, are established specifically for planning purposes.

Committees cannot be classified as either good or bad planning instruments. They are good in some phases of the planning process and ineffective in other phases. They are particularly well-suited to evaluating the data and preparing the final plan, and they are particularly poorly suited to gathering data and implementing the plan. Committees are effective means of establishing company goals and policies. They are almost prerequisite to long-range planning. They can perform effectively in the latter phases of forecasting (analysis of data, evaluation of conclusions). Their role in budgeting has been proved to be of critical value and importance. Scheduling is an integral part of planning and is engaged in by most committees.

Important planning activities are more likely to be delegated to committees to the extent that:

the plans are long range in nature

the plans are significant

the plans are comprehensive

there is little need for speed in planning

committee membership is drawn from higher management

communication and persuasion are critical elements in developing and effectuating the plan.

To the extent that significant planning authorities are delegated to committees, there is a greater likelihood that:

the committee will participate in more of the planning steps

the members of the committee will be more highly motivated in their planning activities

communication and persuasion are likely to be facilitated.

Committees can be made more effective as planning devices to the extent that:

assignments given them are in accord with committee capabilities

there exists clear definition of the committee's purposes

membership is selected with a view to the committee's purpose

proper authorities are assigned the group

staff assistance is given the committee

committee performance is evaluated

planning activities are, in turn, planned.

9

ROLE OF SPECIALISTS

ATTENTION WAS GIVEN IN THE two previous chapters to an analysis of the contributions of all major departmental units (line, staff, and functional) and committees within the organization to the planning function. Staff units and operating units were discussed as total concepts rather than as independent departments.

There is another major unit which deserves separate attention. This unit will be called the specialist. The characteristics of the specialist and his peculiar role in over-all planning will be discussed. Interest here is not in the technical tools used by specialists. Rather, interest is focused on the nature of each specialist and the conditions which surround his participation.

NATURE OF THE SPECIALIST

There are few developments in the general field of management that have captured the attention, interest, and imagination of management scholars and practitioners as has the renewed

ROLE OF SPECIALISTS IN THE PLANNING PROCESS

Although there are major differences in the specific contributions of each specialist to the over-all planning function, there is sufficient similarity in the nature of their impact upon other units in the organization to warrant a single evaluation of their contributions. As in the case of the major units examined, the role of the specialist will be related to each of the various stages of the planning process.

Origination of ideas for plans

The specialist is often in a peculiarly favorable position to initiate two sets of ideas which may result in acceptable proposals. There are those ideas which have rather direct bearing on immediate problem areas. The economist may interest himself in the anticipated shift in basic raw material prices and its impact on the company's pricing policy. The psychologist could be thinking about a new testing scheme to be used for executive selection which would include the use of business cases and management games. The lawyer could be concerned about pending legislation in the area of exclusive franchises, resale price maintenance or fair employment practices. In all of the cases above, top-level management, as well as other units, can easily see that these topics are pertinent to the interest of the company. Should a specialist wish to propose a formal study in any one or all of these areas, he usually will not be confronted with a barrier of misunderstanding or skepticism.

There is a totally different set of circumstances which often exists side by side with this situation. This is the area in which ideas are formulated about concepts and things which have only indirect, if any, bearing on immediate or even long-range problems. This is a crucial problem because a preoccupation with abstract ideas is often inherent in the nature of many of the specialists discussed in this chapter. The behavioral scientist interested in small group behavior may wish to study the relative importance of the group, the formal status of members, (department head vs. foreman, for example), the role of the leader, the social status of members, and so on. The economist may wish to explore the causes of inflation and possible governmental remedies. A mathematician or mathematical programmer might desire to work toward the development of a mathematical model for the industry. In all of these cases, some difficulty may be experienced in getting the proposal adopted by management because of the general nature of the subject. This is particularly true when there is other pressing work to be done or when a large outlay of funds is requested for the project.

Up to this point, the discussion has related to the initiation of ideas by the specialists. In many instances, the specialist is assigned a project or is asked to participate as a team member in the preparation of a master plan. Usually two general conditions exist. One can be called standard, the other special. Under standard conditions the position description would specify the particular areas of authority and responsibility and interdepartmental relationships. Under the special condition, the directive to participate in a given project comes as a specific order from the person authorizing the study.

In the first case, the preparation of plans is automatically authorized as a normal function of the job. For example, the company's economist may be authorized to prepare an annual sales forecast. Under the second condition, the initiative to prepare a plan is taken by someone other than the specialist and he participates by order or request. An example would be the request of the advertising department that the company's lawyer sit in on the discussion of possible new copy for an advertising campaign or a change in the wording on a label.

The specialist holds such a unique position in most organizations that he has a major responsibility to generate new ideas and present them to management in such a way that they can be understood and approved. Many members in the management team simply do not know enough about the possible scope of activities of specialists to take the initiative in recommending studies or projects. This barrier or lack of understanding coupled with much misunderstanding of the role of specialists could result in the failure to utilize the total potential of specialists. The specialist should realize this and work toward the breaking down of these mental and emotional obstacles. If one wished to be dramatic, he could say that not infrequently the specialist, particularly the newer additions, and his discipline are on trial. He must prove himself or he will lose his footing in industry. The challenge is one of having to prove his value not by just performing work specifically assigned but by uncovering ways in which his particular talents can be used.

The areas in which a behavioral scientist may contribute ideas are almost limitless. The following is a list of some of the principal areas in which the psychologist and sociologist may have a major part in planning:

Accidents (psychological aspects)
Attitudes (public and employee)
Counseling (setting up program)
Efficiency
Group behavior (sociometry)
Group composition
Human engineering
Internal communication
Job characteristics (personal aspects)

Labor productivity (job performance measures)
Leadership and creative talent
Merit rating
Morale
Motivation (incentives)
Operations research (motivational research)
Personnel testing
Promotions
Safety devices and measures (accident prevention)
Selection and placement
Supervisory methods
Transfers
Training
Turnover
Work satisfaction

The problem of generating ideas and presenting them in a meaningful proposal becomes increasingly difficult the greater the preoccupation with day-to-day, routine problems; the greater the lack of understanding and appreciation of the role of the specialist by top management; and the more the specialist is oriented toward techniques and processes rather than ends and goals.

When specialists are relatively new within an organization, and the services which they are able to perform are not generally known by other organization members, there is the greater likelihood that the specialist as a planner will find it advantageous to:

seek out ideas from operating units

take the initiative in suggesting areas in which fruitful research might be undertaken, perhaps through the use of examples from other companies

provide an orientation or training program for key executives to familiarize them with the general nature of the professional discipline of the specialists

formulate ideas for plans which can be fairly easily understood and which can be prepared and implemented within a fairly short time period

prepare an inventory, and perhaps tentative time budget and priority system, of significant areas within the organization where fruitful research might be done.

"Selling" the proposal

The best proposal is one that can sell itself on its merits without the need for additional information. However, the specialist will simplify the task of obtaining approval of his proposal if he has first formulated a precise statement of objectives and prepared a broad outline of the proposal. In so doing, he will be chiefly concerned with presenting information so that his superiors will be able to understand all significant provisions of the proposal. This is particularly important when participants in the program include non-specialists and when approval is to be given by a non-specialist fairly high in the organization.

The specialists might note that proposals usually have a greater chance of success when they are presented in terms which clearly indicate expected inputs and outputs in dollar terms as well as descriptive terms. For example, an outline of a proposal to investigate a new executive testing program would include a description of the approach to be used with expected cost along with a description of the expected results in cost caused by reduced turnover and more efficient production.

The greater the separation of authority for approving the preparation of plans from the initiator of the proposal and the more specialized the proposal, the greater the likelihood that the planner will find it advantageous to:

prepare a clear and comprehensive explanation of all elements within the proposal
use terminology and symbols of more general use than those peculiar to a discipline
include substantiating data to justify conclusions drawn.

Organizing planning staff

Along with the general rules laid down for the organizing of any planning staff (for example, insuring proper representation from affected units), there is one additional guide which might be followed when a staff is to be organized for preparing specialized plans. It may be desirous to include on the staff respresentatives from several departments who may serve more as observers than active participants. Their function could be severalfold: they could advise how desired data might be best obtained, when needed, from their department; they could observe specialists in action and learn of possible application of the knowledge and techniques of specialists to problems within their department; they could serve as ambassadors between specialists and their department personnel, thus facilitating cooperation between the units.

When specialists are relatively new within an organization, and the varied services they are able to perform are not generally known throughout the company, the planner is more likely to find it advantageous to:

include on the planning staff representatives from several, rather than a few, departments and representatives having relatively high, rather than low, positions in the organization
use the planning process for general educational and orientation purposes as well as for pure planning.

Determining specific outline of plan

There is usually no significant difference in preparing a specific outline for specialized plans than for other plans. The exception might be when non-specialists are asked to take active part in some stage of the

over-all planning process. If any participant is relatively untrained or inexperienced, a more detailed outline might be prepared as a guide to the participant than would be the case when all members are well qualified.

There is a second condition which may exist which could call for a very detailed outline before data gathering begins. When specialists are fairly new in an organization or when their study is confidential or complex, they may wish to work under very tight direction. Rather than have each participant follow a fairly general plan, it may be deemed desirable to jointly lay out rather specific steps for each member.

As plans become complex, comprehensive, significant and confidential, and as specialists or their programs are fairly new within an organization, there is a greater likelihood that the planner will find it advantageous to:

prepare the outline for a plan in greater detail
use group effort in the preparation of an outline
use considerable time and effort in preparing the outline.

Establishing contact with cooperating units

Although the actual establishment of contact is a direct act, the effectiveness of the act is conditioned by action taken at prior stages of the planning process. The task of establishing contact is made easier if approval of the plan is given by a top executive or a committee representative of all departments affected by the plan, and if the planning staff is composed of representatives of all departments.

The task of establishing contact becomes increasingly difficult when the plan is confidential, complex or comprehensive on the one hand, or when it lacks specificity, completeness, formality, or authorization. When these conditions exist, it is frequently desirable to have a senior executive make the initial contact either by phone or memo.

Of course, the level of cooperation which will exist between the planner and sources of data is also conditioned by the work relationship established by the planner. This complex problem is discussed in detail in Chapter 11, "The Role of Persuasion Theory in Planning."

As the need for and/or the problem of establishing contact with cooperating units increases, there is the greater likelihood that the planner will find it advantageous to:

have a high ranking executive make the initial contact and have the contact be made with an executive at a comparable level
spend considerable time and effort in preparing participants for their role in the planning process
give a fairly elaborate orientation to members of cooperating units.

Providing and gathering data for plans

This stage is often one of the most difficult parts of the entire planning process. The reasons for this difficulty can be better understood after the various sources of information are described. There are two separate approaches that can be used. One is to classify sources as inside the company or outside the company. A second approach is to classify materials on the basis of how they are obtained: records or published material, experimentation, interview, personal or written questionnaire, and observation. An attempt will be made to integrate these two concepts into a single approach. A sample of the kinds of information that might be obtained by these various means is presented in the following table.

TABLE 9-1

MEANS OF OBTAINING DATA
(with samples)

	Interview and Questionnaire	*Observation*	*Records and Published Data*	*Experimentation*
Kind of information obtained	Employee attitudes Consumer attitudes Management attitudes	Work habits, what, how, who Consumer attitudes	Sales Costs Turnover Production quantity Trend of economy	Employee motivation Work method Facility layout Product design Employment procedure

Note that one, two, or all of the means listed may be used for the collection of necessary data. The specialist seeking the necessary raw data for planning purposes frequently runs into two difficulties. One is the inherent difficulty one or more of the selected means may impose upon the specialist. The other is the nature of the data desired.

The specialist will usually use most or all of these means during the course of a normal year's work. The magnification of these problems because of the specific nature of the project and the specialist assigned is treated here.

A staff psychologist may seek to discover the reasons for success or failure of junior executives over a 10- or 15-year period. His approach may be to interview all college graduates, regardless of their present position, who participated in the management training program. His interview is to see if there is any significant correlation between success and failure and such factors as age, previous experience, test scores, college major, intelligence, family status, emotional stability, personal savings, off-the-job

habits, and other selected factors. Of course, he would first check each man's immediate supervisor. Most of the information he wants may have to come directly from each participant. This will probably be the most difficult part, especially when he questions those who have not succeeded at the expected rate. The problem is created because many employees, executives as well as non-executives, resent answering at least a few and perhaps many of the questions asked. The same psychologist could ask these people a long list of questions relating to their views concerning salary practices, hours of work and working conditions without unduly arousing their emotions.

The same can be said for the observation technique of acquiring data. The same psychologist may observe purchasing agents for several hours as they use their telephones to place orders or inquire about purchase arrangements. The purpose of the study is to discover how company purchasing agents are using the telephone with the hope that suggestions could be made as to how they could handle this phase of their work more efficiently. The very nature of the study may cause some of the participants to act unnaturally, thus losing part of the effectiveness of the study. The same psychologist, wishing to measure the amount of machine delay would have no difficulty in observing the flow of goods in a fully automated shop.

The use of records may be difficult for a variety of reasons. Two which are of particular importance here are the confidential nature of the information contained in the record and the up-to-dateness or adequacy of records. These are significant here because the banker, the lawyer, the behavioral scientist and the economist require the use of confidential data as a matter of course. Much of the needed information may be a matter of departmental record and/or corporate records. The holders of these records may be reluctant to release them even to authorized parties. This same group of specialists, with the important addition of the mathematical programmer, may find records inadequate or incomplete. This occurs because, even though the record keeper is competent, the new demands of the specialist either make obsolete the present system of recording data or it requires supplemental data. The programmer working on a maintenance model may require information on the previous maintenance history of each machine, including the kind of maintenance work done, the frequency of each kind, down-time resulting from actual maintenance, maintenance waiting time between stoppage and start of work, cost assigned each maintenance job and other pertinent data. Frequently, one or more of the above items are not available.

The psychologist may find that the executive compensation record, health records, or executive committee meeting records may not be avail-

able to him. Exit interview records and performance review interview records may be totally inadequate for the purposes of his study.

When the specialist designs his own experiment, one might expect little difficulty beyond the normal problems inherent in any experiment. And frequently this is so. On occasion, two additional problems are presented because of the information desired by specialists. The behavioral scientists design many of their experiments around people and hope to measure their responses to various stimuli. This often poses serious problems in companies first embarking on such programs. Much of the experimentation done by economists, mathematicians and statisticians is designed around mathematical models which attempt to simulate the real world. The results obtained from a model are no better than the data put into the model and the accuracy and efficiency of the completed model. Although some models are quite reliable (for example, in inventory, purchasing, maintenance), others have not yet reached the same degree of usefulness. The problem of designing a model and of obtaining the necessary information to use in the model is complicated because relatively few people in a company appreciate the true role of models in decision-making and planning. Some employees view many experiments by specialists with open curiosity, others with doubt, and some with hostility.

Conjectures and projections. One major problem relating to data collection that has not been covered is that of anticipating the future. Particularly as one engages in long-range planning, future expectations take on greater significance. The reference made thus far has been to historical data or present happenings.

Even without long-range considerations, the problem of uncertainty appears. Such items as strategies of competitors, union demands, and consumer acceptance would fall under this heading. The qualified researcher has a number of high powered weapons in his arsenal, of course. Forecasting, market research, and motivational research can do much to narrow the gap. In the decision-making process itself probability theory can help provide management with information that can help in making more intelligent decisions. When the element of uncertainty is still high, flexible plans can be prepared to provide some degree of protection against significant variations from expectations. These various approaches are covered in considerable detail in other chapters.

The problem of collecting necessary data by specialists for planning purposes usually becomes more difficult the more personal or confidential the data desired; the less standard the data desired or the form in which it is desired; and the greater the degree and the greater the possibility of negative repercussions upon the provider of the information.

The more difficult the anticipated problem of gathering data, the greater the likelihood that the specialist as a planner will find it advantageous to:

spend considerable time and effort developing a cooperative relationship, prior to requesting information, with units which are expected to furnish necessary data

carefully select, orient and train the researchers who will collect the required data

allow, and perhaps insist upon, the unit furnishing the data to pass upon the accuracy and completeness of the data after it has been collected.

Evaluating data and preparing plan

After all the necessary information has been assembled and organized, it must next be interpreted. In some cases the interpretation may lead directly to the step of recommendation which will be incorporated in the final plan. For example, in the preparation of a new testing program for executive selection, the result of experimentation with several different tests and various combinations of tests indicates that one combination is superior. In this case, when the interpretation points out the obvious superiority of one method or scheme, parts of the interpretation can be used to support the recommendation in the final plan. Note, however, that recommending a specific testing program does not meet the requirements of a final plan for consideration. In addition, there must be given such items as the assigning of responsibility, the possible use of these tests beyond initial selection (for example, promotion), the starting date for use of these tests, the significance of these tests in the over-all selection procedure, and countless other considerations.

In many other cases, the interpretation of the material may show that the data collected are inadequate and that additional information must be obtained before a useful guide can be recommended. Or, the interpretation of the data may suggest that the information obtained is incorrect and therefore useless.

The specialist usually plays a prominent role in the interpretation of data, just as he did in the gathering of data. Part of the reason, of course, is the logical follow-up after gathering data. The more important reason is the specialized and detailed knowledge one must have in order to abstract the significant and relevant conclusions from the data available. This places a heavy responsibility on the shoulders of the specialist since he may find himself the only one or one of a few members within the organization capable of fully understanding the significance of the data collected. The problem is complicated because seldom does the specialist approve the final plan, and frequently his recommendations will be part of a larger integrated plan.

Under the most complex conditions, the specialist may find himself in a position of having to gather information from persons reluctant to release it; interpreting the information and formulating tentative conclusions which will be discussed and challenged by non-specialists from several operational and staff departments who represent various levels within the organization; and preparing a final plan which will be approved by an executive who may not have participated at any previous stage of the planning process and who may know even less of the specifics of any specialist's discipline than other participating members.

The difficulty here can be divided into three main parts: the lack of general knowledge among organization members of the terminology used by specialists, the lack of understanding of the discipline of the specialist, and the lack of knowledge of and appreciation for the newer tools of data collection, data processing and decision-making. In view of these problems, the specialist must not only face the traditional problems confronted by everyone attempting to sell new ideas, but he must face the additional barrier, at several stages of the planning process, of making his discipline and the tools of his trade fairly understandable to the uninitiated.

The various methods of data collection such as market research and forecasting and new methods of decision-making such as mathematical models are examples of some of the tools of the specialist. The point to be emphasized in this section is that the specialist should present his conclusions and recommendations in such a way that the uninitiated will be able to understand the report without a great deal of oral explanation by the specialist. Although it may appear obvious, the specialist should remember that he is communicating with uninitiated and perhaps uninformed people and not with other members of his profession.

The role of the specialist in the preparation of a final integrated plan is a function of the nature and comprehensiveness of the plan the significance of the plan and the attitude of management toward specialists.

The problem of participating in whole or in part in the preparation of a final plan becomes more difficult as:

the number of participating units which must be integrated into the final plan becomes greater

the divergence between recommended action and present action increases

the lack of knowledge and understanding by other participants of the basic philosophy, tools and techniques of the specialist increases.

When it is anticipated that the problem of participating in the preparation of a final plan may become difficult, there is the greater likelihood that the specialist as a planner will find it advantageous to:

anticipate the type and magnitude of the problems to be faced and to prepare subsidiary plans of his own to allow him to meet these problems

emphasize effective communications and persuasion at all stages of the planning process.

Approval of final plan

Most specialists serve in an advisory capacity and seldom have authority to approve a plan. On occasions one or more specialists might be called upon to give an expert opinion. For instance, a legal adviser may point out that a certain contemplated course of action is illegal, and he may strongly recommend that the plan be rejected. Nevertheless, the president or some other responsible executive or the board of directors may decide to take the risk and approve the plan. Specialists do not approve plans because in their capacity they do not serve ordinarily as line officers but as direct advisors to line executives or as a member of a staff department.

When a specialist is particularly concerned about a plan and desires its approval, he must rely upon the logic of his recommendations and the persuasiveness of his presentation.

The specialist would be well advised to be particularly thorough in testing all components of each plan when he advises non-specialists who lack sufficient knowledge and experience to pass independent judgment in the recommended plan. This is extremely important in the above-mentioned situation because an executive might not be able to give a proper evaluation of the plan, and thus he may overlook important shortcomings. In a very real sense, the only effective checks a specialist might have are an independent test of the components of the plan or a review of his proposal by other specialists within or outside of the company.

The final plan submitted by a specialist or in which the specialist participated has a greater chance of success when:

the components and the plan itself have been thoroughly tested

the specialist is aware of his almost complete reliance on persuasion in gaining approval

past recommendations of the specialist have worked out satisfactorily.

Implementation of plan

As has already been noted, specialists usually serve in an advisory capacity and thus may not have direct responsibility for the implementation of a plan. Usually, however, there is considerable need for having the specialist follow parts of the plan through, checking on its progress, and making pertinent recommendations for change when thought de-

sirable. A psychologist whose plan for changing the hiring procedure, rearranging the office work group, or restyling the company's product has been approved might wish to see that every phase of the implementation period is going according to schedule. Even though he may have no direct authority or responsibility for the physical implementation, he may feel a personal responsibility for checking on the progress of his ideas. He often performs a crucial role at this stage because his specialized knowledge allows him to observe significant variations that others might not notice.

The role of the specialist in the implementation stage becomes more important as the knowledge required for sufficient implementation becomes limited to the specialist; when the failure of the plan would result in considerable loss to the company; and when the plan is inflexible.

Control over plan

The distinction has been made previously between implementation and control. Implementation was described as putting the plan into effect. For example, the plan to use a new channel of distribution might require that a contract be drawn up between the company and any new distributor, the making of arrangements for shipping goods over a new route and perhaps new carriers and countless other acts. Everything that is done from the time the plan has been approved until it has been put into operation is called implementation. Once goods begin to move through the new channel, using the case above as an example, the implementation stage ends.

Control over a plan is referred to as the action taken after the plan has been implemented to check the success of the plan. Specialists often play a vital role here, at least over the initial period of introduction, to see that the kinks are worked out, to help correct unexpected difficulties, or to recommend changes in those areas that cannot be satisfactorily corrected. In each case, the check is usually made against some standard of measurement so that the amount of variance can be determined between actual and anticipated performance.

A second type of control may extend for longer periods because of the nature of the material covered by the plan. For example, a sales forecast may serve as the basis for establishing a sales program for 100,000 units. This goal, in turn, is translated into a production schedule by month, week, day, and perhaps hour. These schedules are all based on the anticipated market viewed by the chief economist. Any variation in the actual market should be reflected in revised production schedules. Note that the economist may revise his estimates significantly in advance of actual production so that no loss is incurred by ordering raw materials

to find the experience most rewarding to the extent that the following conditions exist:

1. There is a real need in the company for the skills of the specialist to be hired.
2. Members of top management recognize or are made aware of this need and concur at least in a general way.
3. Members of top management are prepared to adjust themselves to whatever logical demands are made as a result of the findings of the specialist and are prepared to support his recommendations once approval has been given.
4. Members of top management are intellectually and emotionally prepared to see that subordinate units provide necessary cooperation.
5. Members of top management use prudence and good judgment in accepting and applying the recommendations of specialists.
6. Specialists are hired after fairly tight position descriptions and position specifications have been prepared.
7. Reasonably tight control is exercised over the work of the specialist until he has become properly oriented in the operational procedures of the company.

Part IV

AUXILIARY FUNCTIONS
and their roles in the planning process

Communication and persuasion are integral parts of the planning process. They pervade every aspect of planning, every dimension of every plan, and every step in the planning procedure. Their importance to effective planning is so great that we have devoted two chapters to a discussion of the ways in which communications and persuasion affect planning. We have tried to weave theories about communications and persuasion into our general theory of planning, to point up some of the communications and persuasion problems raised by an organization's attempts to plan, and to suggest ways in which these problems might be attacked by a planner.

10

THE ROLE OF COMMUNICATION THEORY IN PLANNING

A PLANNER ACCOMPLISHES nothing until he communicates to those persons who will implement his plans. In fact, in all likelihood he cannot even develop a feasible plan without prior communication.

The objective in this chapter is the determination and analysis of the relationship of communication theory to the management function of planning. A corollary objective is to present areas in the planning function in which communication problems might arise and to suggest means of mitigation or solution.

"Communication" has been defined as the "process of conveying meaning,"[1] and "to include all of the procedures by which one mind may affect another. This of course, involves not only written and oral speech, but also music, the pictorial arts, the theatre, ballet, and in fact all human behavior."[2] We are concerned here with the kinds of communi-

[1] F. A. Shull, Jr., *Selected Readings in Management* (Homewood, Ill.: Richard D. Irwin, Inc., 1958), p. 254.

[2] C. E. Shannon and W. Weaver, *The Mathematical Theory of Communication* (Urbana: Univ. of Ill. Press, 1949), p. 95.

cation that take place within a business enterprise. Generally, such communication occurs by means of written and oral transmissions, and a variety of human actions—a smile, a wave of the hand, a glare, a failure to speak, or a multitude of other actions.

HISTORICAL BACKGROUND

Because of the complexity of the subject area of communication and the general lack of understanding of its nature, a brief historical treatment will be given. Unquestionably, management communication is commanding increasing attention in current management literature. Until recent years, however, management authorities generally gave only token acknowledgment to need for effective internal communication.

A cursory glance through some of the standard management "principles" textbooks of the past 10 years reveals a curious situation about some authoritative views of the communication process. Many of these works apparently view the communication problem as being essentially a problem of personnel administration, relating somehow to the management functions of directing and controlling. Frequently, these texts make passing reference to communication as being a vital element in the organization because of the need for employees to be informed by management and for management to be informed by the employees. Some management texts, for example, refer to "channels of supervision and communication" as though communication were only a vertical phenomenon within the organization, restricted to formalized paths.

Perhaps the greatest recent progress toward solution of communication problems in the business organization has occurred in the field of human relations. Authorities in this field are giving greater and greater recognition to the vital need for communication *throughout* the organization, not just as a means of keeping employees informed. A healthy attribute of some late work in human relations is pointed recognition of the fact that communication is not necessarily limited to a flow of information from management to employee to management, that communication occurs in all directions within and without the firm.[3] Much communication theory of particular interest to the business world falls into three broad areas of research and thought: mathematical theory, semantical theory,[4] and theories drawn from network experimentation.

At this stage of progress in the management field it appears reasonable to predict that management people of the immediate future will lean even

[3] See Charles Chandler Parkhurst, *Business Communication for Better Human Relations* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1961).

[4] See "Executive Communications: Breaking the Semantic Barrier," *Management Review*, Vol. XLVI, No. 4 (April, 1957), p. 58.

more attentive ears toward communication scientists in efforts to discover the whys and hows of communication. The door of today's business world is wide open to attorneys, mathematicians, and the behavioral scientists. There is no reason to believe that the communication scientists will be denied access to the same door.

PLANNERS IN THE ORGANIZATION

The growing organization is likely to be an organization that is adding to the complexity of its communication systems and patterns. Especially is this true when the organization is adding staff groups to its structure, because staff specialists are prone to speak a language of their own (see Chapter 9, "Role of Specialists"), a language which is perhaps strange to the members of the old organization. Yet, paradoxically enough, a primary function of the staff is communication. Among other things, a staff group might perform such functions as gathering data, issuing reports, preparing directives, coordinating activities, advising persons. In all of these functions communication plays an important part.

The advent of the specialist, then, has had a tremendous impact on the communication problems and needs of the business organization. In this chapter a point of view is taken that the preponderance of legwork carried on in the planning function is done by staff workers, although the final approving authority for the plan is usually a line executive.

A further point of view is taken that most finished plans in an organization represent the work of not just one man, but many men. On occasion, however, it is necessary to refer to the work of an individual as though his work constituted the whole planning process. Rather than stopping repetitiously to make a distinction each time the individual in an organization is related to the planning process, the word "planner" will be used to refer to any one of the following individuals:

1. An individual who is gathering data for a plan.
2. An individual who is furnishing data for a plan.
3. An individual who is analyzing data for a plan.
4. An individual who is conceiving ideas for the plan.
5. An individual (or individuals) who prepares the plan for approval.
6. An individual (or individuals) who approves the plan.

COMMUNICATION AS A FUNCTION OF PLANNING

Some significant relationships between planning and communication

Planning, as has already been noted, stands out distinctively among the other basic functions of organizing, controlling, staffing, and directing.

Unlike the other functions, however, the planning function is carried on in an atmosphere of intangibles, an atmosphere characterized by futurity and its inevitable companion, uncertainty. It is no surprise, then, that the planning function has characteristics which are peculiar to the function itself. These characteristics of the planning function give rise to some unique problems of communication.

Planning is an intellectual process. A plan is almost invariably a product of some degree of creative thinking on the part of the planner. The creative thinking process is stimulated by the existence of a problem which must be solved or an objective which must be ascertained and set by the thinker. Obviously, the more complex the problem, the more complex must be the thought carried on to reach a solution to the problem. In the initial stages of thought, the complexity factor introduces an introspective problem, a problem in which the thinker is actually frustrated by his efforts to form and coalesce his thoughts as he carries on creative planning.

At this stage in the intellectual process of planning, the planner is likely to be plagued with imagery which he cannot form into a cohesive whole to represent even the embryo of his plan. On being asked about his progress with a plan at this point, the planner might respond with, "Well, I'm getting some ideas, but I haven't been able to put them together yet." This situation points to the futility of expecting an individual to communicate clearly and coherently with others about his plan at an early stage in the planning process.

As the intellectual planning process continues, frustration should tend to diminish. The planner should be able to start piecing together previously conceived, perhaps seemingly unrelated ideas. The intensity and extensity of thought necessary here, of course, would depend on the intellectual capacity of the planner and his ability to discern relationships of previously conceived ideas to the problem or objective and the plan. It is highly probable that some initial ideas will be discarded as having no relationship to the plan; others will be modified to more properly apply to the plan; and still others will be held in abeyance for possible later application to the plan.

What about the prospects for communication at this stage of the intellectual process of planning? Could the planner intelligently communicate to a second party (or second parties) a concrete picture of the plan to date? The answer to these questions would probably be affected by the complexity of the plan the planner is attempting to conceive. Obviously, if the problem involved is simple planning for, say, the future arrangement of office furniture, the planner could communicate in such expressions as:

I'm thinking of putting the supervisor's desk by the north window. But instead I might put the calculator operators by the window and the supervisor over by the side door.

On the other hand, if the plan involved futurity of complex action, say, the introduction of a new product to the market in the following summer, the planner might attempt to communicate in such expressions as these:

It looks as though our best course of action will be to reorganize marketing research to a certain extent to handle some new problems that this product is going to create. Right now, I'm just thinking off the top of my head, but it looks to me as though it would be a good idea to upgrade marketing research in general.

In the first instance, the planner could communicate fairly adequately, even though his planning process had not reached a stage advanced enough for some of the important decisions to be made. In the second instance, in contrast, the efforts of the planner to communicate were weak and ineffectual. The explanation for such differences lies in a consideration of the markedly different abstraction levels involved in the two situations.

The first case, the planning for future arrangement of office furniture, involves a relatively concrete situation. The variables with which the planner must work (desks, chairs, office equipment and space) are easily visualized by the planner himself and can be just as easily visualized by the individuals with whom he seeks to communicate.

A much higher abstraction level is reached in the second case, however. The planner in this case, unfortunately, is likely to feel that what he is telling the communicatee makes perfect sense because the planner, from his vantage point, can easily visualize the action involved in the abstractions expressed.

This second case illustrates a cardinal communication problem which is likely to arise in the planning process—the problem of communicating through abstractions. This problem bears further examination.

Planning creates abstractions. The abstract word suggests meaning inside of one's head, an image which has no counterpart in the real physical world, and the meaning is prone to vary from individual to individual. The antithesis of an abstract word is a concrete one. The meaning of the concrete word is denoted in that object which the word stands for; a picture image of the actual object is visualized.

The planning process, being an intellectual process, must necessarily deal in abstract concepts as well as concrete tangible objects. The planner will probably be guided in his planning function by concepts—probably his experience and the principles of management and planning that have

evolved from his experience. His plan, as finally communicated, will outline a course of action for physical objects (people, machines, money) within the organization which has been determined on the basis of abstract *concepts* (e.g., authority, departments, fairness). In all likelihood the written document representing the plan will justify future action on the basis of abstract concepts used to determine that course of action. It is highly probable, therefore, that the written plan will be heavily characterized by abstractions necessary to justify the action of concrete elements in the organization such as particular people, particular machines, particular materials, and so on.

It is undoubtedly true that the more complex the plan being created by the planner, the more necessary it is for the planner's intellectual process to rely on concepts, thus abstractions. It logically follows that the planner who is dealing with a highly complex planning situation must rely heavily on abstractions in his efforts to communicate. In the two example cases previously cited, some significant differences between the abstractions necessary for communication can be seen. The planner dealing with a simple rearrangement of office furniture could use concrete objects (desk, supervisor, window, door) as his reference points for communication. Attempting to communicate the current status of his planning process, the planner who dealt with the introduction of a new product had to rely on such abstractions as:

our best course of action
reorganize
marketing research
good idea
upgrade

At this point, a conclusion can be ventured that communication is a vital part of the planning function from the very outset. For example, the planner's problem of communicating abstraction, after the planning process has advanced from the initial idea-evolving stage, could have a significant effect on his success or failure in gathering necessary further information to proceed with his plan. In order to secure further information, he would need to make his request for information meaningful to a communicatee. The best way to make such a request meaningful would be to show clearly to the communicatee the relationship between the information and the plan. The ease with which this clear relationship can be shown varies inversely with the degree of abstraction which must be used in the communication medium, whether the medium be oral or written.

The plan must be encoded. The culmination of the planner's work is the encoding of his plan and final transmission of the plan to those com-

municatees who are affected.[5] For many short-run planning purposes (a few minutes, an hour, a day, or possibly a few days) plans are undoubtedly put into phonetic symbols. Of more interest here is the fact that plans are also encoded into written symbols, especially in those cases where the plan involves even a small degree of complexity.

The advantages of the written plan over the oral plan are both obvious and multitudinous. Suffice it to say that the spoken word, phonetic symbolism, is furtive, thus is a poor substitute for the written word if it is provided as a guide to action that extends over an appreciable period of time.

On the contrary, however, phonetic symbolism offers a certain advantage to some general communication in that the communicatee can interrupt the communicator to determine shades of meaning or otherwise to make understanding more complete. To accomplish similar communication through written symbolism is often awkward, involving greater expenditure of time and effort.

It is probably safe to assume that both the planning process itself and the resulting plan are generally so complex within the dynamic business organization that most encoding designed to facilitate planning must involve written symbolism. This need for encoding, simply stated, brings with it problems of writing to plague the planner. These problems can best be overcome through an awareness of and use of good writing techniques. Many good business communication books now on the market can give specific pointers on such techniques. Generally included among them will be such suggestions as: keep sentences short; use paragraphs to break the text into readable units; use short and specific expressions so that writing is direct; word the sentence so that the relative importance of ideas within the sentence is shown, and avoid technical business jargon.

Techniques such as these should be of value to the planner at any stage in the planning process when it is necessary for him to communicate through the written word. Certainly techniques such as these should be of critical value when the planner reaches the stage at which he is ready to encode the plan preparatory to transmission.

The plan must be transmitted. Of particular interest to mathematical communication theorists are the means of transmission of information. Transmission, of course, is the process through which the communicator makes available to the communicatee the symbols which are to be decoded. The transmission problem is most acute in cases of phonetic symbolism where such interferences to transmission as noise factors and

[5] Claude E. Shannon of the Bell Telephone Laboratories has popularized the terms *encoding* and *decoding* among communications theorists to describe the phenomenon in which ideas are translated into symbols and symbols are translated into ideas. See *The Mathematical Theory of Communication*, p. 101.

mechanical failure of transmission means can cause breakdowns in communication.

The plan must be decoded. Decoding, in a manner similar to the planning function itself, involves intellectual activity. The decoder must translate the symbols he receives into meaningful ideas. In the case of a plan, these ideas must be related to action on the part of the communicatee. On a very elementary plane, the communicatee's thought process might follow these steps as he contemplates the copy of a written plan he has just received:

What is this?
What does it say?
What does it mean?
Does it affect me?
If so, what must I do or not do?

The decoding process introduces what will be called here the Communication Paradox. The Communication Paradox is best defined in the form of a question:

Why is it that a communication can be encoded and decoded in symbols common to both the communicator and communicatee, and, yet, the meanings conveyed to the communicatee do not correspond to those intended by the communicator?

We have not as yet resolved this paradox, but the relatively new science of communication gives us some insights that help us to understand why it exists, and it points the way toward improved communicative skills. We have come to recognize that each person attaches meaning to audio and visual symbols that are probably unique to his person, such meanings being derived from his personal physical characteristics and the sum total of that person's experiences in life—experiences which are different from those of every other human being. The figure and quotation below serve to show how dual and multiple interpretation of symbols comes about.

The human filter[6]

INSIDE MR. A

What appears to take place when Mr. A talks to Mr. B is that first of all, at Stage 1, some event occurs which is external to Mr. A's eyes, ears, taste buds, or other sensory organs. This event arouses the sensory stimulation that occurs at Stage 2. The wavy lines are intended to represent the fact that the process of communication takes place in a "field of reality," a context of energy mani-

[6] The diagram and quoted material below are from Wendell Johnson, "The Fateful Process of Mr. A Talking to Mr. B," *Harvard Business Review,* January, 1953, pp. 49-56.

have so conditioned their filters that they see and hear different things, even though they are observing the same person uttering the same words at the same time.

The existence of the filter at Stage 3 of the process of communication is the basic fact. . . .

Self-Projection

Because the filter is there in each of us, self-projection is a basic bodily process that operates not only in all our speaking but in other kinds of communicative behavior. . . .

An administrator whose language becomes too "is"-y tends to persuade himself that what he says the facts are is the same thing as the facts, and under the numbing spell of this illusion he may become quite incapable of evaluating his own judgments. If he is aware of projection, he must make clear, first of all to himself, that he is not speaking about reality in some utterly impersonal or disembodied and "revealed" sense, but only about reality as the prism of his own nervous system projects it upon the gray screen of his own language—and he must realize that this projection, however trustworthy or untrustworthy, must still be received, filtered, and reprojected by each of his listeners.

. . .

Stages of planning communication

The role of communications in planning can be given diagrammatic representation as has been done in Fig. 10-2. In Stage 1 there is recognition of a problem and the need for a plan. Communication plays a part in the initial cognizance of the problem. Then follows the birth of ideas, their arrangement, rearrangement and modification. In this stage we find creation of the abstract concepts with which planning is concerned. In Stage 2 the ideas are shaped into communicable symbols. It is here that differences in communication skills become important. Selecting symbols meaningful to the communicatee requires considerable skill first because

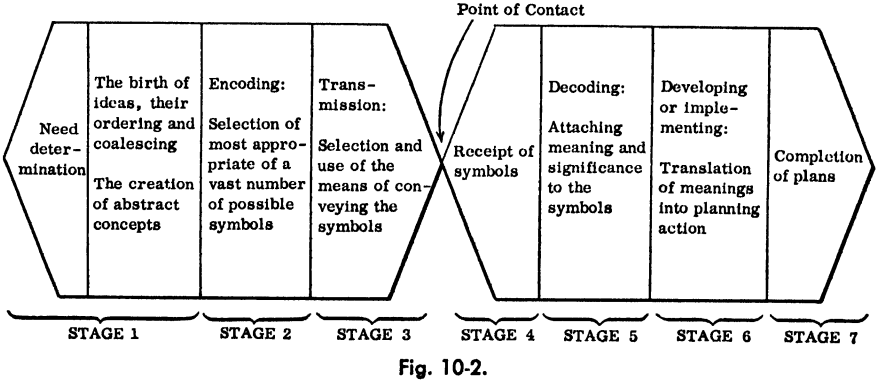


Fig. 10-2.

there are so many thousands of possible symbols that might be used, and second because to know what symbols will be meaningful to the communicatee means that the communicator must know something about the person he wishes to communicate with—something of his "filter." In Stage 3 we have the choice and use of the means of transmitting the symbols. In most significant and important planning the written word should be used, especially where the planning takes place over a considerable length of time. (This does not mean that verbal communication will not also play an important role, perhaps even a more important role.)

Stage 4 depicts the receipt of the symbols, Stage 5 the decoding. It is in this stage that the differing filters spoken of in the preceding quotation come into play. Stage 6 is the translation of meaning into action. This stage will include more than mere communication—motivation, persuasion, the provision of adequate facilities, for example. The last stage, 7, is the completion of the plan. Of course, Stage 6 will have included much in the way of communication as the persons charged with carrying out the plans feed back information to the planners so that the actions will be controlled.

Flows of information in planning

The manager in a typical business today depends upon communication to bring harmony to the complicated relationships with which he is daily faced. Interactions and reactions of such organizational elements as people, machinery, and methods are manipulated by the manager by means of communication. Each manager within the organization (from supervisor up to president) functions as a communication center—originating, receiving, and relaying information. An organization proceeds erratically or smoothly toward its objectives according to the efficiency or inefficiency of its communication centers.

The planning function gives rise to networks of communication within the organization; these networks, in turn, give rise to problems of communication. Before these problems are examined specifically, there should be in these pages some analysis of the general flows of information in a business organization.

Information flows vertically within the organization. The most obvious flows of information within an organization are vertical, downward from the upper reaches of the hierarchy and upward from the lower reaches. Many of the most critical communication problems within a given organization could perhaps be traced to flaws in the vertical channels utilized by the organization. A certain communication channel might be disrupted simply because of mechanical failure of the means used for transmission of information. More significant problems are represented by situations

in which someone in the channel deliberately blocks communication by withholding information, or distorts intended meanings, or by situations in which a communication center did not understand the information it was to relay downward or upward within the organization. Ultimately, of course, the planner is concerned with problems where an information center, representing the ultimate communicatee, took improper action on the basis of the signals he failed to comprehend.

Information flows horizontally, diagonally, and throughout the organization. Of particular interest to this study are those tenuous problems of communication which have as their origin the complexity of the organization itself. In a certain strange sense, organizational complexity and planning efficiency are bedfellows within the organization. A contributor to organizational complexity is the superimposition of staff groups on the organization structure as the organization grows. These staff groups, bringing specialized knowledge to the organization, make major contributions to the value and efficiency of planning and, at the same time, bring with them important communications problems.

Communication research dispels a notion that the major portion of information within the organization flows neatly over the horizontal and vertical lines revealed by the company's organization chart. Although research in this area of communication apparently is limited, it appears reasonable to conclude that a great deal of cross-communication does occur within *any* organization. This cross-flow of information is undoubtedly of very great significance at the upper levels of the organization where important planning activities are carried on. The value of cross-communication here is that it facilitates and expedites the planning activity by making it unnecessary for those contributing to the plan to carefully conform to vertical lines of authority. The dangers of cross-communication, of course, are self-evident. If the cross-communication device is used merely to circumvent lines of authority, its purpose has been defeated. Also, if it results in a superior's being uninformed about activities taken by or affecting his subordinates, the results will be deleterious. Such cross-communication and diagonal communication are not shown on the formal organization chart, yet they represent very valuable channels for conveying information to and from the planner.

BARRIERS TO COMMUNICATION IN PLANNING

Perhaps the greatest barrier to communication within the organization is the organization itself. As the organization grows, it expands both vertically and horizontally to the point that each executive has literally hundreds and even thousands of persons with whom he could and should

communicate. Increasing the number of employees in a given firm results in a disproportionately larger increase in the number of communications that must take place.

The next most obvious reason that organizational growth spawns communication problems is that such growth widens the gap between communicators and communicatees. This separation involves time and distance, distance being measured both spatially and organizationally. Time is involved because in a larger company the communicatee tends to be spatially farther removed from the communicator, because he must communicate with more people, and because larger firms tend to have more organizational strata. Thus, they have more "links" in the chain of communications, each link or communications center requiring some time for encoding, transmission and decoding of the transmitted symbols. A logical consequence of this time and distance separation is a tendency for intra-organization communication to rely more heavily on written as opposed to oral media of communication where the message is complex, significant, pervasive, or covers long time periods.

Because of the all-pervasive nature of the planning function, the organizational barrier to communication is most significant. There must be a free flow of information throughout the organization as the planning function is carried on, especially in that stage of the function in which data is being assembled for necessary decision-making and in the implementation stage. Any barrier to communication, of course, impedes the flow of information[7] in an organization. We are concerned here specifically with the flow of communications for planning. For purposes of this discussion, then, there should be at least a brief examination of some of these barriers to effective communication.

The distance barrier

We have already pointed out that growing organizations are confronted by problems of communication emanating from increased spatial and organizational distances between communication centers. Locational dispersion makes for fewer contacts and contacts of shorter duration. This, in turn, makes communication more difficult. Organizational distances also separate people. With a 10-man company, each subordinate receives his orders from and reports to the firm's top executive. When the company grows to 50 persons, the management finds it expedient to insert a second layer of organization between the top executive and the operating personnel. This removes the top executive from immediate contact

[7] Throughout this discussion, we have referred to the communication of "information." Actually, one communicates attitudes, emotions, ideas, as well as data. The word "information" should be interpreted loosely here.

with the people he formerly supervised personally. This, in turn, means that he and they must sometimes go through an intermediary to communicate with one another. This takes time. It allows for misinterpretation and distortion. Communication may suffer. Lack of face-to-face contacts is a very serious impediment to effective communications for planning in business. Let anyone who doubts this try to communicate solely through another person, and he will soon see the value of communicating in person, using gestures, smiles, voice levels and intonations that cannot be conveyed by means of an intermediary. If the intermediaries are several rather than one, the problem is compounded.

The status barrier

People communicate differently with other people depending upon differences in their statuses. Part of this is organizational. One just does not tell the president of the company the same kinds of things he tells his foreman or his fellow worker. The sales manager does not communicate the same kinds of things to the production superintendent that he does to his secretary. Each of us likes to show himself off to best advantage to his boss and to other people in the organization who can affect his future and his welfare. We usually (most often unconsciously) communicate those things to our superiors that will put us in a good light. Conversely, we tend to refrain from communicating things that will cause us to lose esteem in their eyes. This partial communication may be purposeful or unconscious, but it happens to nearly all of us. Sometimes this extends to our fellow workers; we are reluctant to communicate to superiors anything that will reflect disadvantageously on our colleagues.

The status barrier is raised even higher where the superior finds it necessary to erect an artificial impediment—where he feels the necessity of proving his own knowledge and skills to be superior to those of his subordinates in order to justify his higher organizational status. Sometimes this need on the part of the superior is manifested by subtle but nonetheless well-communicated indications that he wants to be referred to by title, refusing social intercourse with his subordinates, demanding formality in meetings, and so on. At its worst, this phenomenon is manifested by the withholding of information from subordinates so as to make the superior appear more knowledgeable, public criticism of subordinates, and other actions designed to lower the status of the subordinate relative to that of the superior.

One of the authors participated in a program to train foreign professors to teach in a newly founded college of business administration. The professors were educated in the European tradition wherein the professor is a revered figure who is extremely "expert" in his special area of knowl-

edge. It was necessary to train these professors, who had degrees in law, engineering, and economics, to teach business administration subjects. Business problems are characterized by a multiplicity of possible solutions. Sometimes there are no "correct" answers to business problems. But it was very difficult to persuade the foreign professors that they could admit that there were many possible solutions—or that in fact they did not know which was the best possible answer—without losing some of their dignity as experts in their new field. Somehow they felt that to say "I don't know" involved an intolerable loss of face, and perhaps in their culture it did. Nonetheless, by playing this role of expert, they were erecting a real barrier to free communication between them and their students as well as creating tension-ridden situations in which they must always come up with the "correct" answer.

The status barrier involves elements other than organizational position. Age, income, and education form parts of the barrier. It is well known that children and teen-agers often communicate among themselves matters denied to their parents and others in older generations. The same is true of young executives versus old and young secretaries or production workers as compared with their older counterparts. Such barriers exist between line and staff, and between planners and the people who implement the plans.

The status barrier will always be with us, even if we do away with superior-subordinate relationships, which is unlikely. The wise planner acknowledges the existence of this barrier, recognizes that many persons throughout the organization will not communicate fully with him just because of what he is and the position he holds, and takes action to minimize the effects of this barrier. Some of the things he can do to minimize the effects of the status barrier are discussed in the following chapter.

The uncritical assumption of communication

Many of us go about our business with the happy thought that others understand exactly what it is that we have tried to tell them, believing that they see things just as we do and that they use words in the same way we do. When we have told someone something, we have no reason to doubt that they understood, unless of course they indicate their lack of understanding through obvious responses. In the absence of some overt indication of misunderstanding, we uncritically assume that we have communicated successfully. This uncritical assumption can arise in several ways: (1) through an unawareness of the existence of individual "filters," (2) through an unawareness of semantic differences and nuances, (3) through an inordinate reliance upon the written word, and (4) through a

resultant ignorance of the need for followup to ascertain responses to communicated symbols.

We have already quoted and commented upon the existence of individual "filters" through which each of us perceives the world around us. An awareness that such a filter exists will cause the planner to *expect* to be misunderstood, realizing that every other living human being possesses a filter which is peculiar to himself and that this causes him to see, hear, and feel communication symbols differently from all other persons. Expecting to be misunderstood, the good planner can take pains to overcome the misunderstanding.

An unawareness of semantic differences arises in part from the existence of these differing filters. To be unaware and to be ignorant are two different things. Most of us *know* that words have different meanings when uttered by different people or in differing contexts. The problem is not one of ignorance, but rather one of keeping constantly alert to the extensiveness and importance of such differences in the meaning of words.

Frequently, we have a suspicion that we have not or will not communicate effectively. A solution proffered for this is frequently to "put it in writing." This, of course, has considerable merit. It forces the communicator to think more fully of what it is he is trying to get across and to think more carefully about the symbols he chooses to express himself. It has the added advantage of uniformity, where the communication goes to several or many persons, and it has the advantage of being "operable" over long periods of time in contrast to oral communications which are fleeting and transitory. The barrier it presents is the human tendency to consider that, once it has been put down in writing, communication has taken place. Nothing could be farther from the truth. Written communication is just as susceptible to misinterpretation as is oral communication—perhaps even more so because it cannot be accompanied by facial expressions and other methods of communication. It allows no opportunity for feedback, for asking questions and ironing out possible misinterpretations, or it makes such feedback time-consuming and clumsy. The point here is that we uncritically assume that once messages are put on paper, understanding follows automatically. This uncritical assumption is a barrier to effective communication.

Item four, ignorance of the need for followup, is part of the same general barrier. If one assumes that he has communicated, then there can be no need for followup. When a company sends out a general directive to its employees, it is generally held to be understood. Only infrequently is there a followup to ascertain if the message was interpreted as intended, or to measure the nature and extent of misinterpretation so as to make future communications more effective. Sometimes this is done in a general way through morale surveys. On the individual level, the executive some-

times ascertains communication effectiveness at the time of the communication. Too often, though, miscommunication comes to light only after the subordinate has taken some action contrary to those wished by the superior. With planning, such miscommunication tends to come to light only after the plans have been put into effect and the results prove to be something different from those desired by the planner.

The channel barrier

Companies with formal organization structures usually use the lines of authority and responsibility as channels for communication. Attempts to restrict communication to these formalized channels can only have a deleterious effect upon communications as a whole. They will not be confined to formal channels, of course, since people will always find informal ways of conveying meaning to one another. But communications can be stultified, modified, or distorted when forced into unnatural flows. The planner is especially dependent upon informal, loosely-woven communication patterns for his data gathering and feed-back requirements. He cannot work effectively if confined to long-established, formalized avenues for transmitting information. On the other hand, such formalized channels do play an important part in company communications. Their importance is not questioned, only overzealous attempts to carry on all important communication through these channels.

The channel becomes a barrier when someone in the channel either unintentionally or purposely blocks communications up or down in the organization. For example, a planning committee made up of a cross-section of subordinate executives may find that a proposal upon which they have spent weeks of study has been suddenly made obsolete because of a decision by top management which the committee members did not know was under consideration. Under ordinary circumstances, communication might have taken place outside the formal channel, but when the management insists that the formal channel shall be the only route such messages shall travel, communication suffers.

The semantic barrier

We have already commented upon the semantics problem in communications, but its importance makes it worthy of specific mention. The semantic barrier will always exist, but the communicator generally adds to its formidability by failing to take into account his reader's or listener's capacity to understand. This may be an especially severe problem when specialists are involved since many specialists find that a technical terminology is second nature to them. However, the fine meanings of such words may be lost on the non-specialist communicatee.

Inadequate media barrier

Here we are concerned with the means used for transmitting communication symbols. This barrier is usually not a serious one, becoming so only where there is also the "uncritical assumption" barrier. Adequate media are available; it is usually a matter of recognizing the need for them and using them. A three-man organization can undoubtedly carry on its planning function with a small number of communication media at its disposal. Larger companies, however, must rely on a large number of media—company newspapers, teletype machines, bulletin boards, or two-way radio. The non-availability of communication media through which planning information can be quickly transmitted would provide a most serious and obvious barrier to communication in planning. At the point when top planners are in the process of making major decisions relating to the plan, it is especially essential that media of communication be open and available to the planners for the gathering of further information or the refining of information previously gathered.

The action barrier

Spoken and written words become meaningless in the presence of actions which belie their validity. Actions *do* speak louder than words. We can make pronouncement after pronouncement about the company's desire to treat employees fairly and to promote on the basis of merit, but it takes only one unwarranted promotion of the boss' son to communicate to the employees what our real desires are.

There is a story about a politician running for office. His record was an unsavory one, filled with broken promises to his constituents. In running for office, he was making a speech filled with new and grandiose promises, quite obviously unattainable. At last a listener stood up to say, "Sir, what you *are* speaks so loudly, I can't hear what you *say*." In the last analysis, we judge people and companies, not by what they say, but by what they do.

Overcommunicating as a barrier

Communication, like any other thing of value, can reach a point of diminishing, and, in fact, negative, returns.[8] A too enthusiastic communicator can spoil his best-laid plans for communicating by grinding out directives in such copious quantities that communicatees have neither

[8] Technically, this is not true. Where so much material is transmitted that it is impossible to absorb and understand it, communication is not taking place; transmission is occurring. If communication is defined as the conveying of meaning, then communication does not take place under these circumstances.

the time nor energy to consider and understand the directives. If the individual within an organization who is coordinating planning finds it necessary to flood the organization with memoranda, telephone calls, and personal visits, it is highly likely that a conference is in order for round-table communication to smooth out performance of the planning activities.

THE PLANNING PROCEDURE AND COMMUNICATION

An orderly procedure for planning should contribute much within an organization toward ironing out wrinkles in the organization's communication networks. If the planning function is carried on in a disorderly atmosphere, on the other hand, it is highly probable that serious breakdowns in communication will occur. Communication breakdowns in planning can result in costly errors of judgment and duplication of work on the part of planners.

The instance cited above in which a planning committee was informed too late of certain proposals of top management affecting planning being carried on is a case in point. The weeks of study the planning committee had carried on, only to find that the planning was obsolete, undoubtedly cost the company a considerable amount in unproductive time on the part of its planners. This cost would have to be attributed to top management's failure to communicate its thinking and action that significantly affect the planning function. There was probably an even higher but less tangible cost in the lower morale that would prevail among the committee planners.

It is possible in determining a procedure for planning for a company to anticipate communication needs at various points in the procedure. An effective procedure for planning has been outlined as follows:

1. Be aware of a possible need for formulating a plan.
2. Formulate a precise statement of the objective of the plan to be prepared.
3. Prepare a broad outline of the proposal.
4. Obtain approval of the proposal.
5. Organize the planning staff and assign responsibility.
6. Determine the specific outline of the plan.
7. Establish contact with all cooperating units.
8. Obtain necessary data.
9. Evaluate data.
10. Formulate tentative conclusions and prepare tentative plans.
11. Test components of tentative plans.
12. Prepare the final plan.

13. Test the plan.
14. Obtain approval of the plan.

Each step (some of which have been combined below) of this procedure poses particular needs for communication.

Awareness of need

Conception of the need for planning activity conceivably could originate at any point within the organization. The board of directors itself, for example, might conceive a need for planning. The president of the company might set in motion the organizational machinery for planning, or a bright young specialist, occupying a niche within a staff group, might make known a need for specific planning. Still another origin of the need for planning might be traced to a customer, a supplier, or some other source from without the organization. It would be most difficult to specify that area within or without the organization where plans should originate because the planning function embeds its roots in ideas, and ideas do not necessarily respect horizontal and vertical channels of authority.

Formulating precise statement of objective

Regardless of where the need for planning is conceived, the need for communication makes itself immediately apparent. Until the need for planning is communicated, the need exists only in the recesses of its conceiver's mind. The planner's first communication responsibility, then, is to project his idea for planning. Usually, the best medium through which this idea can be projected is a written medium, a letter or memorandum directed to some individual who is vested with authority to give an organizational green light to the planner to proceed with his work.

Preparing broad outline of the proposal

If the organization has a permanent planning group, the letter might be directed to the planning group itself. The planning group, after considering the written proposal, could then secure authorization from the president or board, if necessary, for the planning to be carried on.

Certain standards for this proposal to plan can be established in the interests of clear, complete, and effective communication, regardless of the level of the organization at which the proposal must be approved. The proposal should assume such dimensions and proportions as these:

1. In its beginning paragraphs the proposal should clearly set forth the objectives and values to be sought in the plan to be prepared. Any problems to be solved by planning should be carefully defined.

2. The proposal should tentatively enumerate the factors and variables which would have to be investigated and considered by the planners. The purpose here is to give the plan's authorizer a general idea of the scope of data gathering which will be necessary to the plan.

3. The proposal should indicate to the addressee some tentative ideas as to where and how data for the plan could be gathered.

4. A first approximation as to time and cost of the plan should be indicated in the proposal. Substantiation of this first approximation would rest on assumptions; these assumptions should be clearly stated to the addressee.

5. The proposal should indicate to the addressee elements of the organization that will possibly be affected by the plan.

6. If necessary (and in many cases it probably would be), the planning proposal should be couched in such terms and organized in such a way as to "sell" the addressee on the need for planning to promote organization efficiency and economy.[9]

To minimize the effects of abstraction on the proposal, the techniques for clear writing discussed above should be utilized. The proposal, which constitutes the origin of the plan, is a medium of idea communication. Ideas are abstractions. They can be communicated most clearly if the communicator leans heavily on concrete words, simple sentence structure, and logical organization for his writing.

Obtaining approval of the proposal

It is not enough for the addressed authority merely to stamp the proposal "approved" or "disapproved" and return it to the individual originating the proposal. Possibilities of future communication breakdowns occurring can be minimized considerably if the approval or disapproval of the proposal receives the same care and attention that were given to the proposal itself.

Approval of the proposal should constitute a meeting of minds between the originating planner and the approving authority, who, in many cases, will probably ultimately be responsible for the plan. The approving authority would use the medium of approval as his opportunity to anticipate and correct any future problems that will be generated by the planning activity. He should also use the medium of approval to correct or modify the objectives which should be sought by the plan. And, finally, he should use the medium of approval to give his own ideas and

[9] Item 6 introduces the danger of subjectivity to the proposal. This danger can be minimized if the communicator analyzes the future benefits accruing from planning on the basis of present diseconomies in the organization. It is necessary, therefore, for the proposal to be analytical rather than exclusively informational.

reflections as to such things as the variables and time and cost involved in the planning.

These standards might well apply to the official approval of the proposal:

1. In its beginning paragraph the letter or memorandum should state that the proposal has either been approved or disapproved. If the proposal has been disapproved, justifying reasons for the disapproval should be given and analyzed. If the proposal has been approved, Standards 2 and 3, below, should apply.

2. The approving authority should restate in his own words the objectives to be sought by the plan. This restatement is necessary if the planner is to know that he has been effective in communicating *his* view of the objectives to the approving authority. This restatement will minimize the possibility of a future situation arising in which the planning function must be redirected to new channels seeking objectives different from initial objectives simply because the approving authority became aware of the fact that planning was not proceeding along channels he anticipated.

3. The approving authority can, if appropriate, provide copies of his approval to interested and affected elements in the organization. The provision of these copies will obviate the later necessity of the planner's obtaining authority to cross-communicate in the organization in order to gather data for planning. Preferably, however, the approving authority would write a letter to concerned individuals in the organization which conforms to the standards suggested earlier in this chapter. This letter might be used as a letter of transmittal for the communication approving the planning proposal. Communications of this sort will preclude duplicating and wasteful planning in other parts of the organization.

Setting the planning function in motion

Communication complexities of setting the planning function in motion can be minimized with effective communication of the proposal and its approval. At the point in preplanning activity where the proposal has been approved, utilizing the standards just enumerated, individuals with the organization who are to be affected by the planning function are already aware of the pending planning activity.

Three activity areas are involved in setting the planning function in motion. First, the planning staff must be organized and responsibility assigned. Second, contact of the planning staff must be made with all cooperating organizational units. And, third, a specific outline of the plan itself must be created to guide the planning staff in its work.

Organizing the planning staff and assigning responsibility

Communication needs arising from the organizational phase of the planning function will depend, of course, on the type of organization to be used. On the one hand, a planning committee might be appointed to function for the formulation of a particular plan, then be dissolved on completion of its work. On the other hand, a company might have a permanent planning department or committee. In the event the latter situation prevails in a company, no particular communication problem should present itself. Each member of the staff, equipped with a copy of the memorandum approving a previously submitted planning proposal, would be ready immediately to commence his planning. In such a case, the chairman of the planning group or committee would undoubtedly be the communication center for the group and would follow an established procedure in fixing responsibility for new planning to be undertaken by the group.

A different situation prevails, however, in the case where a planning group is temporarily organized to undertake a planning project. In such a case, a written medium should be utilized in organizing and fixing responsibility of members of the committee. A ranking line authority, for example, might make the final decision as to who will be on the committee and as to what responsibility will be assigned to each committee member. In such a case, the line executive would have the option of either writing a general memorandum to all selected members of the committee or memoranda on an individual basis. Regardless of the means selected, the communication to members could clearly delineate the functions to be performed by the committee members (or point out that the division of duties will be decided by the group itself) as well as the responsibility which will rest with the committee as a whole. Each member should be provided with a copy of the approval of the planning proposal, thus orienting him to the job ahead. The communication to the individual member should inform him that he has been placed on the committee and is to perform certain designated functions. It will sometimes be necessary to call the committee together to communicate more fully just what the role of each individual will be. Often the committee members will decide among themselves what parts each will play in the total picture.

Determining the specific outline of the plan

The determination of a specific outline for the plan involves a consideration of the specific factors to be studied by the planners. If the planning procedure is being carried on by a committee, the members of which are specialists from various parts of the organization, the outline will un-

doubtedly be a joint product of all members. Initial communication to determine the outline will probably take an oral form, as in committee meetings. These meetings should be dedicated to a discovery of the specific contribution to the outline that each committee member can make on the basis of his specialized knowledge and experience. If the planning being carried on, for example, involves markets for a period five years hence, it may be that the member of the committee representing market research will contribute that portion of the plan's outline which deals with motivational research. The mathematician member of the committee may indicate as his contribution to the outline the planning that would be necessary to data gathering for linear programming and other model building. In the final analysis, then, the outline for the plan will consist of an assembly of ideas of the planners.

Communication problems growing out of the outlining stage will undoubtedly be limited to the confines of the committee itself. Working in close proximity, members of the planning committee can work out communication problems as they arise. Written communication breakdowns, for example, can be mended by supplementary oral communication. Many communication problems in this stage of planning will undoubtedly be semantic in origin. That is, the market research man on the planning committee may not understand the symbols used by the engineer from research and development. And perhaps the market research man and engineer will both be confused with the psychologist's symbols of communication. This problem in semantics among the immediate members of the committee can best be overcome through conscientious effort on the part of committee members to couch their communications in symbols understandable to their fellow committee members.

Contacting cooperating units. It is at this stage of the planning procedure that the letter situation mentioned on page 275 arises. From the standpoint of good communication practice, this is a most critical stage for communication in the planning procedure. If favorable contact is made with cooperating units, many problems of communication arising out of the need for cross-contact of planners can be circumvented.

Obtaining the necessary data

The planning function is so all-inclusive in its effect on the organization that the planners who create the plan must gather information regardless of (or perhaps in spite of) normal channels of communication. It is perhaps only in the implementation stage that the planning function closely conforms to vertical channels of communication.

Data gathering is a primary function of the planning process within the large business organization. It seems reasonable to assume for pur-

poses of communication-problem analysis that the data-gathering function creates certain communication situations which must be coped with by the planner who "fans out" in the organization to do his work. Further, it seems reasonable to assume that the complexity of the data-gathering function increases in a direct relationship with the complexity of the plan being created as well as with the complexity of the organization structure itself.

Communication is vital to effective planning regardless of the methods of data gathering that are used. For purposes of brevity, and because these methods make communication especially vital, we will discuss the role of communication as it relates to two methods of data gathering: (1) the company records search, and (2) the intracompany personal interrogation method. In both these cases it is highly probable that the planner must leave the confines of his own office or environment and attempt to communicate with strange people in strange places in the organization if he is to gather necessary data to fulfill his responsibilities. For purposes of this analysis, an assumption is made that the planner is a representative of a staff group or department; but recognition should be given to the fact that line personnel within the organization could also engage in the data-gathering process. It is reasonable to assume, however, that the preponderance of data gathering within an organization is carried on by staff groups and individuals.

It is a truism in communication theory that when rapport is established between the communicator and communicatee communication breakdowns are less likely to occur. It follows, therefore, that one of the first steps which should be taken to pave the way for a planner to cross channels of communication to secure data is the establishment of an harmonious atmosphere. (In the planning procedure, this stage has been designated as one in which contact is made with cooperating units.) The establishment of this atmosphere, whether the research method be company records search or personal interrogation, can be accomplished verbally or by means of a letter or memorandum, preferably originating at a fairly high level of authority within the organization. This same communication, incidentally, constitutes authority for the planner to cross formal communication channels.

If the data gathering is to be universal in the organization, this communication might take the form of a general written directive. If the data gathering is going to take the planner only to isolated parts of the organization for records search or personal interrogation, preferably the letter should be addressed by name to affected individuals.

The letter should achieve these common objectives:

1. The letter should make clear the organization values sought in the plan to which the respondent will contribute. These values can be com-

municated through a statement of the objectives of the plan. A statement in the letter such as this might suffice:

In order to lighten the recordskeeping burden of department heads, the Methods and Procedures Section is preparing a plan for future centralization of company records.

2. The letter should point out also any individual values that will accrue to the reader as a result of the plan.

3. The letter should make clear to the reader just what he is expected to do in cooperating with the planner who will be contacting him.

4. The letter should briefly explain the procedure being followed in the planning function in order that the reader might have the satisfaction of measuring the degree of his individual contribution to the plan.

5. Preferably, the letter should allow the reader some option in the time that he will see the planner.

These standards for effective intrafirm communication would apply to establish needed rapport for either the company records search or interrogation.

In the case of a company records search, a special communication problem sometimes presents itself to the planner. It is unreasonable to assume that all planners have a thorough understanding of the records through which they will search, although the information which they need to find in and pull from the records is vital to their plan.

However, if the way has been properly prepared for the planner, the company record search method of data collection should present no major problems of communication. In the case of interrogation research, on the other hand, some significant problems can arise, especially if the interrogation involves a face-to-face relationship of the planner and the respondent. Interrogation problems can become acute if the respondent and planner do not meet in an atmosphere of rapport. And interrogation sessions can be chaotic if the planner has not adequately prepared for the interrogation. It can be concluded, therefore, that communication during interrogation can be facilitated through:

1. Previous arrangement for the interrogation session. This previous arrangement allows the respondent to have needed information readily available. Moreover, it makes the respondent's position in the plan clear. And, finally, the communication constitutes authority for the planner to take the time and energy of the respondent.

2. Careful preparation by the planner before he attempts to conduct the interrogation. This careful preparation involves a well-thought-out scheme on the part of the planner as to how he is going to conduct the interrogation. In some cases the planner can be guided in the interrogation by a carefully prepared, tested, and printed questionnaire. In other

cases, nondirected interrogation might be preferable. This latter case does not rule out the need for prior preparation on the part of the planner; to the contrary, the need is perhaps intensified because the planner will need to keep in his mind what amounts to a mental outline of the purposes of the interrogation and the kinds of information that could be useful to him.

Evaluating the data

Data analysis in the larger business organization today is being more and more subjected to the electronic processes of the computer. There is reason to believe that the business world today is on the verge of the era of the "thinking machine," a machine which will not be subjected to many of the frailties of man's own analytical processes. Ultimately, however, we must relegate the refined analytical process to the human element in the organization.

The analytical process is used by the creative thinker as a bridge between the process of recognizing a problem and the process of "originating or inventing an idea." In this analytical process, the thinker takes data which have been made available to him and breaks them down to see their innermost relationships. This high-order intellectual process, reserved only to man, gives birth to an introspective problem which necessarily precedes communication. This introspective problem weighs heavily on the planner when he first attempts to analyze data for the plan. He is frustrated by his inability to blend ideas derived from data analysis. He is further frustrated by his initial inability to communicate coherently about his plan with his fellow planners at planning committee meetings.

Once the introspective-problem stage is passed and the planner progresses to the abstraction and encoding stages, data analysis has resulted in ideas that can be communicated. From the standpoint of effective communication, it would seem that the less time the planner must cope with the introspective problem, the more quickly he can proceed to the encoding phase. A simple aid to the planner here would be for him to have made available to him data in good form, that is, data which have been carefully edited and classified and placed in an understandable format.

Tentative conclusions and plans; testing components

According to the planning procedure outlined, before the plan is ready for final preparation concerted efforts of the planning group have been directed toward the formulation of tentative conclusions and the testing of components of the plan. If such testing reveals the plausibility of tentative conclusions, the plan is ready for final preparation. If such

testing reveals imperfections in the plan, these imperfections, of course, should be excluded from the final plan. This testing process itself should eliminate certain difficulties in communicating the final plan because the testing process should minimize abstractions through provision of further concrete data for support of the plan.

Preparing the final plan

The final written plan should conform closely to the conventional business communication criteria of clearness, completeness, and conciseness. The planning committee will do well also to give detailed attention to the organization of the finished plan. It is likely that each member of the planning committee will contribute segments to the completed plan. Some member of the committee should be designated to have responsibility for the final organization of the plan. Criteria for organization of a written plan characterized by even a slight degree of complexity might be as follows:

1. A summary of the plan should be provided. This summary should first state the major objectives and values sought in the plan. Then the summary, in general terms should outline the course of action to be taken in the plan. This course of action should be organized around the chronology involved in the plan. The plan's summary should preferably be provided on pages separate from the body of the plan itself. Such an arrangement would make it possible for the summary to be easily detached from the body of the plan and perhaps given wider distribution than the plan itself receives.

2. The plan proper should lead off with introductory material. After a brief identification of the objectives of the plan (this identification duplicates the identification made in the summary), the introduction should cover such factors as these:

   a. Identification of authorization for the plan (probably a letter, by originator and date, in which the proposal for the plan was approved).

   b. Identification of the individuals who contributed to the plan, along with identification of the specific material each individual contributed.

   c. A brief discussion of the significant historical event contributing to the need for the plan.

   d. A discussion of research methodology used in gathering data for the plan, along with a discussion of any limitations of the data (e.g., it might have been impossible to gather certain significant data, a situation which the reader should weigh as he considers the plan).

e. A preview (especially in those cases where the plan is long) of the organization of the plan in order that the reader might place himself in a logical frame of mind to understand the plan.

3. Immediately after the introductory material, the plan should move into a presentation of the courses of future action proposed.

Obtaining approval of the plan

Communication scientists are in general agreement that, where a complex written communication situation exists, supplementary personal contact aids communication. Undoubtedly this general principle would hold in the case of a plan. All planners who have contributed to the plan, therefore, should be given an opportunity orally to defend their work and clear up any misunderstandings on the part of the plan's readers.

Presentation of the plan, from the standpoint of communication, should follow a somewhat formal two-step procedure. First, the plan should be presented to approving authorities by means of the letter of transmittal, a prefatory part of the plan itself. Then, after approving authorities have had an opportunity to digest the plan, a formal meeting of the planning group should be held with the approving authorities.

Planners should come to the formal meeting prepared to defend their contributions to the plan. Indeed, "sell" might be a better word than "defend." Presumably, the plan itself is postulated on the basis of objective analysis of facts and data. This objectivity, founded as it is on the ideas of other men, is not always immediately apparent to the approving authority. Supplemental oral contact with the planners gives the approving authority an opportunity to sit in judgment of the plan while, at the same time, gaining insight as to the real capacity of the planners to influence the destiny of the company.

SOME GUIDELINES FOR COMMUNICATION IN PLANNING

The preceding analysis has revealed that communication is a vital function of planning from the time the need for planning is conceived until the very moment at which planners attempt to secure approval of their plan by means of supplemental oral communication. Communication is, therefore, an absolutely necessary, continuing, and integral part of planning. A breakdown in communication must eventually bring the planning function to a halt. Even in the unlikely case in which one individual in the organization conceives the need for planning and assumes the full burden of planning, communication is a necessary function because of the significant role it plays in data gathering.

This chapter has as its primary objective the determination and analysis

of the relationships of communication to the management function of planning. Particular relationships of communication to the planning function are seen in the intellectual process the planner must carry on. The introspective problem in communication arises when the planner attempts to bring unity to ideas which have been transmitted to him for planning purposes. In data analysis, for example, the planner is likely to be plagued with the introspective problem, a situation in which the planner attempts to organize his thoughts for communication. The introspective problem is a source of frustration to the planner as well as an impediment to the planner's efforts to communicate his plan.

Another relationship of communication to planning is seen in the abstraction problem. The intellectual process of planning must necessarily deal in abstractions because the process must deal in concepts which, *per se,* are abstractions. The abstraction problem becomes acute as the planner attempts to communicate both his planning and the final plan itself.

Planning, then, creates abstractions which are difficult to communicate. But planning also creates organizational problems which in turn generate communications problems. Planning often means the introduction of staffs; staffs tend to becloud the normal communication flows. Planning usually means fanning out in an organization to gather data and to explain the why and wherefore of the plan. This plays havoc with formal communication channels. As planning units are established in a growing company, there tends to be erected a distance barrier to communication —such distance being measured both spatially and organizationally.

Other barriers to effective communication exist to plague the planner. These include the status barrier, the uncritical assumption of communication, the formal channel as a barrier, the semantic barrier, the media barrier, the action barrier, and the dangers of overcommunication.

These then are broad relationships of communication to planning. These relationships provide a basis for analysis of specific communication problems which tend to arise in the business organization as the planning function is carried on. At various places in this chapter, we have suggested ways in which the planner might approach his communications problems. There is no need to repeat them at this point. Instead we have set forth five guidelines below. Simple in content, these guidelines nevertheless should direct the planner's thinking into channels for effective communications in planning.

Communication consciousness in planning

One of the first steps of a new planning group should be toward establishment of standards and systems for communication. Such a step minimizes possible future communication breakdowns resulting in work

duplication and nonproductive time on the part of planners. Top management, as well, should be highly conscious of the need for communication to and from the planning group in order that the group might modify its planning function to keep it harmonious with changing top level policy.

Awareness of the human filter

The planner should be aware that each person looks at the world around him in a manner unique unto himself; his way of looking at things depends upon the sum total of his experiences in life, as well as the physical and mental makeup he carries as a person. He attaches meanings and shades of meanings to words that may or may not be shared by the planner. The good planner, like any good administrator, then, *expects* to be misunderstood. Knowing that each person within and without the organization is likely to interpret his message differently, he takes care to see that he uses words meaningful to his communicatee, and to follow up to see that his message has been received and understood in the way intended.

Techniques for clear writing in planning

This admonition is a very obvious, but sometimes slighted, principle in the business organization. Business writers are sometimes prone to give lip service to the techniques for clear writing while writing 300-word sentences and four-page paragraphs. In the case of planning, clear writing is particularly essential because of the abstraction problem, and because the plan will result in action.

Free flow of planning information

Because of the all-pervasive nature of planning, channels of communication in the organization should be opened and kept open for planners. There should be recognition within the organization of the need for planners to go to all parts of the organization for data-gathering purposes. It is essential, of course, that these planners be equipped with authority to cross-communicate as necessary in their work. The authority for this cross-communication should be provided in writing where appropriate.

Orderly procedure for planning communication

The planning function itself is best executed on the basis of an orderly procedure. This orderly procedure provides also a step-by-step outline of the needs for communication in planning.

Effective communication in planning is a function of the nature of the

plan and its components, the qualifications of the communicator and communicatee, the level of communication consciousness in the organization, the adequacy of the media available for communication, and the number of people involved in the planning process.

As plans become more comprehensive, complex, and significant, the importance of effective communication increases, and the difficulty of effective communication increases.

The greater the need for and difficulty of achieving effective communication, the greater the likelihood that the planner will find it advantageous to:

handle communication as a distinct problem

test the plan or components at various stages of its development for its communication effectiveness (for example, verbal explanation of a written plan)

use supplemental communication (for example, verbal explanation of a written plan)

design one or more components of the plan specifically to communicate (e.g., an orientation session as a component of a plan to reorganize).

11

THE ROLE OF PERSUASION THEORY IN PLANNING

IN CHAPTER 10, WE FOUND THAT a plan is of little value until it is communicated to those persons who are responsible for its execution. But mere communication does not suffice, not even clear, concise, complete communication. More than this, the communicatee must somehow be motivated to carrying out the specific steps in the plan's action in the manner and at the times indicated. Sometimes this understanding and acceptance are routine, following adequate communication; more often an element of persuasion is required. This chapter deals with some of the concepts and techniques that are used in gaining cooperation in the development and execution of plans.

Persuasive skills are necessary in every phase of the planning process. The planner must, for example, convince a superior that a plan is needed and that time and effort should be expended in developing a plan. Then he must convince others to cooperate in the data-gathering stage. Still later he must persuade other members of the plan-

ning group of the advisability of one alternative as contrasted with the others. Then he must persuade the approving authority of the virtues of the final plan. Finally, he must persuade those persons who are to carry out the plan of the desirability of doing so.

THE CONCEPT OF PERSUASION

A planner may gain the cooperation of others by essentially two means: he may order them and he may persuade them. The use of authority, "ordering," in a business organization has several advantages. It is speedy. It is simple to use—requiring little in the way of insight or understanding. It can be used to handle large numbers of people at the same time. Lastly, its use is often gratifying to its holder. In general, restrictive authoritative methods may be effective in situations that meet some or all of these conditions:

1) The change that (the superior) is trying to bring about is a change in specific overt action, rather than in generalized action or attitude.
2) The restrictions are seen (by the subordinate) as depriving rather than frustrating.
3) The balance of power is such that (the subordinate's) power is minimal and (the superior's) maximal.

One might add a fourth condition, too: Restriction can be effective when speed and/or uniformity are critical.[1]

It is evident that there are relatively few instances wherein the exercise of mere discipline will bring about the behavior desired by the planner or administrator. "Administrators have increasingly recognized in recent years that authority, unless buttressed by . . . influence, is relatively impotent to control decision in any but a negative way."[2] Nonetheless, as noted above, there are some situations wherein the planner can and does use his authority rather than persuasion. This will occur, of course, only in the relationships between the planner and his subordinates. In all other relationships, the planner has no authority and must rely upon persuasion or power.

Power and authority

Power is the ability to employ force. "Force . . . means the reduction or limitation or closure or even total elimination of alternatives to the social action of one person or group by another person or group."[3] The

[1] Harold J. Leavitt, *Managerial Psychology* (Chicago: University of Chicago Press, 1958), p. 147.
[2] Herbert Simon, *Administrative Behavior* (New York: The Macmillan Company, 1958), p. 147.
[3] Robert Bierstadt, "Power and the Social Organization," *American Sociological Review*, Vol. 15 (December, 1950), pp. 730-36.

gunman who says "your money or your life" has power; he can employ force. He limits one's choice to parting with one's money or being killed —a very severe "limitation of alternatives" in social action. Power exists in the absence of any formal organization. The gunman for example, is powerful, exercises force outside all formal organization. As we shall see power also exists within an organizational framework. If it becomes institutionalized, it is called authority.

Power has its base in inequality. One person has power over another because he possesses more knowledge, physical strength, or some other characteristic that make the two unequal. Only in this way can the one limit choices of the other.

When we speak of one person's holding power over another, we sometimes forget that we really are speaking of a *balance* of power. We tend to assume that the superior power is the only power. We overlook the fact that the "inferior" person also has power—that he can limit the choices of the person with greater power. Herein lies the fallacy of using naked authority to accomplish one's purpose.

The superior-subordinate relationship is an *inter*dependent one. The superior is dependent upon the subordinate; the subordinate can limit choices of the superior. These limitations, of course, may not be as critical as the kinds of limitations potentially imposeable by the superior, but they are nonetheless existent. The subordinate can, for example, withhold information from the superior, thus limiting his choice. Or he can carry out the superior's directive to the letter, perhaps subverting the intent and limiting choice. Most importantly, he can perform with minimal efficiency, meeting the superior's minimum requirements. This, too, is a limitation of choice for the superior, who wishes to have his department be the most efficient one in the organization. In a very real sense, the superior is dependent upon the subordinate. This is what makes reliance upon sheer power so tenuous. If it were true that only the superior had power and if the subordinate were completely powerless, it might be feasible to rely completely upon power as a motivating device. Since the subordinate always has power, however, and since the superior is dependent upon the subordinate, and since subordinates, by grouping together, can realign the power balance, it behooves the enlightened manager to minimize his reliance upon his power superiority. In any event, there are many persons outside the reach of a given planner's power—customers, the general public, and people in other departments. In his relationships with these groups, the planner must resort to the use of persuasion.

The existence of authority in an organization results from conscious efforts to structure power relationships between people. We artificially assign *extra* power to certain people who will hopefully use this additional power to further the goals of the enterprise. Thus we create what is in a sense an artificial power inequality.

Authority is an institutionalized power. It is power made formal. It involves rights. More specifically, authority *is the right to limit choice within an organization.* These rights are granted by the society in which we live—through government and property owners—to the top executives of an organization, and by the persons in the organization who choose to subject themselves to this authority in return for the satisfaction of some of their needs.

Authority, like power, is coercive. It depends upon the potential limitation of choice for its effectiveness. What distinguishes authority from power is that the holder of authority has the *right* to employ force—to limit choice. Not all such limitations are authoritative. The gunman was powerful, but not authoritative. He was not exercising force within an organizational framework, and he had no right to limit choice. Likewise, the president's secretary who coerces the purchasing agent into doing her bidding because she has knowledge that would damage his career if told to the president is manifesting power, not authority. She has no institutionalized right to limit his choices.

The right to limit choices has another side. It usually carries with it the right to broaden choices. For example, one who has authority might broaden choices by promoting a subordinate or giving a pay increase, as well as reducing choices through discharge or a pay cut.

The superior might exercise authority by not broadening choices while at the same time not actually reducing them from their present number, e.g., by *not* promoting. The foreman has authority. He has the right to limit choices of those persons under his jurisdiction. He does this quite obviously when he says, "Do this job or draw your pay." He is exercising authority much more subtly when he merely refrains from recommending a man for transfer, but the man's choices have nonetheless been limited.

There is another aspect of authority that helps us to recognize it. Where authority is manifest, the recipient of a communication "holds in abeyance his own critical faculties for choosing between alternatives."[4] The recipient of an authoritative communication does what he is told. He may ask himself if this is the best of all possible alternatives, but he does not translate his thoughts into actions.[5] This reaction on the part of the recipient helps us to distinguish authority from influence.

Authority attaches to a position. The president of a firm has the right

[4] Simon, *op. cit.*, p. 126.

[5] He can refuse to carry out the directive in which case the authority becomes ineffective, but not nonexistent. The superior may then limit choices of the subordinate by punitive action, e.g., discharge. Some writers make the point that where the subordinate refuses to comply, authority is nonexistent. Our conception of authority does not agree with this view. See Chester Barnard, *Functions of the Executive* (Cambridge: Harvard University Press, 1938), for a discussion of the acceptance theory of authority.

to discharge the sales manager. If the president is demoted to the position of treasurer, he loses this right, and the new president receives it. Thus the right goes with the position and not with the man occupying the position. Nonetheless, authority is nothing more than institutionalized "rightful" power, and power describes a relationship between people, not positions. Although authority goes with position, it becomes meaningful only when the positions are filled, and, in its most meaningful sense, authority comes to describe relations between persons.[6]

Influence

Influence, on the other hand, requires no ability to limit choice; influence is persuasive. It rests on a sort of "consent of the governed." The recipient of an influential communication, a suggestion, "accepts it as one of the evidential bases for making his choice."[7] He receives the suggestion, weighs it against other possible alternatives and makes a free choice among them. He does not usually "hold in abeyance his own critical faculties for choosing between alternatives."[8]

Influence rests on a base of superiority. We consider an idea, a doctrine, or a plan to be superior to other ideas, doctrines, or plans and we let them "influence" or affect our behavior. Influence is not coercive. Unlike authority, it does not depend upon a potential limitation of choice, but only upon the recipient's perception of the suggestion as being superior to the alternatives.

USE OF AUTHORITY AND PERSUASION IN PLANNING

The roles played by authority and persuasion in business planning depend upon the nature of the plans, whether they deal with internal or external matters, and upon who does the planning.

The nature of the plans

There are some types of plans that have persuasion as their very objective. That is, the plans themselves are designed for the purpose of persuading. Plans for employee recruitment might involve several com-

[6] Authority is a concept dealing with power relationships between people. We are excluding from consideration authority in the sense of permission, such as when authority (permission) to change workplace layout is granted to a worker.

[7] Simon, *op. cit.*, p. 127.

[8] He may do so, but this uncritical acceptance of the suggestion does not suffice to make the communicator authoritative. The right to limit choice must also exist. The commonly used concept of "technical authority" frequently results in an uncritical reception of a suggestion, but this does not mean the holder has authority. In our terms of reference, "technical authority" is a misnomer and might more appropriately be called technical influence.

ponents such as personal calls at universities, contacting friends of present employees by phone, working with labor unions and employment services, and television and newspaper advertising. The over-all recruitment plan, as well as each component of the over-all plan, would have as its objective the persuasion of people to apply to the company for employment.

Other plans may have other objectives and also have subplans built into them which have persuasion as their purpose. For example, a company may design a plan which has as its objective the conversion of all short-term debt into long-term commitments. This over-all financial plan may have as one component the negotiation of a long-term bank loan. This component would then be broken into smaller components, one of which would be the gathering and presentation of data designed to persuade the bank that the loan is a meritorious one. The purpose, the goal, of this subplan would be persuasion, such persuasion being only one component of the over-all financial plan.

The introduction of a new product would involve an over-all plan, one component of which would be the advertising campaign necessary for the successful implementation of the larger plan. The production of this new product might also involve the acquisition of new and different materials. This, in turn, could involve persuading suppliers to buy new equipment and stock new products in order to service us. A plan might be devised for the specific purpose of persuading these suppliers.

Regardless of the objective of any given plan, be it persuasion or not, persuasion is probably necessary in every step in the planning process.

Internal and external plans

It is evident that the business planner has no authority over persons outside his company. If these outsiders have any part in the formulation or implementation of his plans, persuasion must play a major role. Force might be used in some instances, but in the vast majority of cases the planner should and does rely upon his ability to persuade. This would be true, for instance, where one seeks the cooperation of other companies in determining prevailing wage levels in the labor market. It would be true where rezoning was a necessary part of plans for plant expansion, where changes in the corporate charter were necessary before new activities could be engaged in, and where suppliers would be called upon to deliver materials prior to agreed-upon delivery dates.

Persuading outsiders is very often more difficult than persuading persons within the firm to cooperate in the planning process or in the execution of plans. Sometimes, for example, the introduction of a new product can call for rather drastic changes in the living and consumption habits of

the public, perhaps even in the value systems of the society. These changes may be extremely difficult to bring about—much more so than persuading people within the firm to participate in the planning that is prerequisite to the production of the new product. The first production and marketing of canned fruits and vegetables probably involved much more in the way of persuasion of the public to buy than it did persuasion of persons within the firm to take on the new products.

In persuading outsiders, the planner has fewer weapons working for him. He has few face-to-face contacts. His relatively prestigious position within the firm is of little value. Few people are aware of his superior knowledge or skills, and few people know or care that he has the ear of the president or enjoys some position close to the source of authority. He cannot gain cooperation by appealing to higher authority to order other persons to do his will. In some cases, the numbers of people who must be persuaded are much greater outside the firm than in it. People outside the firm are harder to get in touch with and, once contacted, generally more difficult to communicate with effectively.

Who does the planning?

The role played by persuasion in business planning will depend upon who is doing the planning. If line executives are doing the planning either individually or as a group, planning and "doing" will probably be combined in one position and one person. In this case, authority plays an important part.

Where the line executive undertakes planning activities on his own for problems within his own department, authority-utilization may be maximized. Very likely, he needs no authorization from above to undertake the planning. In most cases, he will approve the final plans himself and issue orders to his subordinates to facilitate the implementation of the plans. If the planning is completely confined to his own department, even the data-gathering stage of the planning process might be characterized by the use of authority.

The minute the line executive needs cooperation from other units—the moment he steps outside his own bailiwick—however, persuasion enters the picture. If he needs information from any department other than his own, he must depend upon successful persuasion. If the final plans call for any action at all by other departments or by persons outside the organization, he must depend upon persuasion. Conceivably, he could go to his superior and ask that the other units be ordered to cooperate, but even this means that persuasion is necessary to convince the superior of the advisability of such action.

Where the planning function is delegated to staff specialists rather than

to line executives, nearly everything must be accomplished through persuasion. The staff specialist has no authority to order anyone in other departments to do anything. From the initial determination of need to the final act that completes the execution of the plan, persuasion is the dominant element.

We have cited the increased use of the staff specialist in business planning. When these persons do the planning, persuasion becomes more important because (1) there is a separation of "planners" from "doers," and those who carry out the planning must be convinced of the necessity and desirability of the action, and (2) the staff specialists have no authority.

The use of persuasion in planning depends upon the nature of the plan, upon whether outsiders are important to the success of the plan, and upon who does the planning.

To the extent that persuasion rather than authority is the dominant element in the planning process and in execution of the plans, one finds:

persuasion is the goal of the plan or one of its components
non-employees are critical to a plan's success
specialists do the planning
plans cover organizational units other than the planner's own.

PERSUASION, AND THE DIMENSIONS OF A PLAN

Complexity, comprehensiveness, and significance

The task of persuasion becomes more difficult for the planner as plans increase in complexity, comprehensiveness, and significance. Complex plans are harder to promote in that full understanding of them may be restricted to a few persons in the company while the plans themselves may affect hundreds or thousands of persons. Sometimes, complex plans are of a technical nature, couched in technical symbols understandable only to specialists. As understanding becomes more difficult, persuasion becomes more difficult.

As plans grow in comprehension persuasion becomes more difficult and more important. A comprehensive plan, as used here, is one that affects or is affected by a number of different parts of the organization. A non-comprehensive plan would be one confined to a single organizational unit. As plans become more comprehensive they must be either developed or executed or both in several different departments. This means contacts with many persons in the fact-gathering stage. It means that many people in many organizational units will have to participate in its execution. When multiunit participation is called for, cooperation is the only basis for action. Rarely can much be accomplished through the exercise of mere discipline arising out of formal authority.

As plans become more significant to the welfare of the business, persuasion plays a more important role. Conservatism comes to the fore when changes of major import are proposed. When a planner suggests changes which vitally affect the enterprise, he must be prepared to overcome a natural tendency to stick with the tried and familiar. The more significant the change, the greater this tendency.

Specificity and completeness

We have defined a complete plan as one which contains "all necessary components for proper judgment to be passed on its adoption or rejection and for its expeditious implementation." Completeness aids persuasion in two ways. First, completeness leads to better understanding of the plan, and understanding is the first step toward acceptance. Second, completeness may make a plan more flexible. If all necessary information is embodied in the plan to facilitate its adoption or execution, such information may be full and complete enough to allow for deviations or modifications to deal with changed conditions. (It is important to bear in mind at this point the distinction drawn in Chapter 2 between completeness and specificity.) Flexibility facilitates persuasion.

Specificity, too, may facilitate persuasion or reduce the need for it. Specificity, like completeness, aids understanding, and thorough understanding, persuasion. Clear understanding of the purpose of a plan, of the procedures used in planning and executing the plans, of the times and quantities and persons and roles lends itself to successful cooperation. This is not always true, of course. Sometimes, resistance is engendered only after general plans are narrowed down to more specific subplans. Also, specificity may create inflexibility in plans, and, this in turn, makes the job of persuasion more difficult.

Flexibility

In Chapter 2, we stated that plans can be flexible in three respects: (1) they can incorporate physical objects which are flexible in their usage, (2) the plan as a unit can be flexible, e.g., a variable budget, and (3) a component of a plan can be flexible. If a plan is flexible in any of these three respects, persuasion is facilitated. Flexibility means ease of adjustment to changing conditions. If some person needs convincing that a given plan is meritorious or that he should participate in the planning process, he will generally be more willing to cooperate if it can be shown that the plan is designed to meet a variety of conditions. In a few cases, flexibility will detract from successful persuasion. This condition might prevail where someone has a vested interest in carrying out a *particular*

course of action and where alternative courses of action would not be to his best personal interests. In such a case, flexibility would make persuasion more difficult. This is a minor exception, however, and, in general, the more flexible a plan is, the less difficult is the job of persuasion.

In a sense, it is incongruous that flexibility makes persuasion easier. The more specific and detailed a plan is, the less flexible it is. Specificity tends to inflexibility. Yet we have said that specificity aids persuasion and that inflexibility detracts from persuasion. Perhaps this seeming incongruity can be explained by pointing out that specificity both adds and detracts from ease of persuasion. It makes persuasion easier in that the stipulation of particular dates, of particular quantities, of particular procedures to be followed allows each person to know and understand the nature and purpose of the plan, and his role in developing or executing it. Specificity, insofar as it creates inflexibility, detracts from ease of persuasion. For example, stating that an expenditure of $10,000 will be made, that the money will be borrowed, that it will be borrowed and repaid as of given dates, and that a certain person will conduct the negotiation with a specified bank, may make the plan so inflexible as to engender opposition. Such opposition could emanate from the choice of the person who is to conduct the negotiation, from the choice of the bank or the dates or amount involved. It might be much easier to elicit cooperation and approval if the plan provided for negotiations with several banks in order to secure the most advantageous conditions, or if it provided for alternative dates, quantities, or personnel.

These are offsetting elements, then. To the extent that specificity promotes understanding, it promotes persuasion. To the extent that it promotes inflexibility, it detracts from persuasion. The net effect will depend upon the relative strengths of these two forces.

Time

Time enters the planning process in several important ways: time needed to prepare the plan, lead time for major portions of the plan to get under way, and the time period covered by the plan. The time needed to prepare and get final approval of a plan is directly affected by the resistances encountered and by the persuasive skills utilized by the planners in overcoming the resistance. Sometimes, the time needed to prepare a plan can be reduced by having some component of the over-all plan deal specifically with persuasion. A plan to revise the wage structure and the bases for promotions might have its preparation time reduced if it has a component which deals with the enlightenment of people within the company about the purposes of the plan. This component or subplan paves

the way for cooperation in the fact-gathering, organizing staff, getting final approval and other stages in the planning process.

Lead time for any given component may be affected by the need for persuasion. For example, the advertising component of a plan to market a new product will be affected by the time requirements of the production component of the plan, and also by the time it takes to persuade distributors to handle the new product, to accept exclusive dealerships, and so on. On the other hand, longer lead times allow periods which can be devoted to persuasion should it be necessary.

The time period covered by the plan is related to persuasion in that longer-range plans introduce additional degrees of uncertainty. As uncertainty increases, the plan becomes less "saleable" because its benefits cannot be determined with precision. There are occasions, of course, where uncertainty makes a plan more rather than less palatable, but these are in the minority.

There is another aspect of timing in planning that will be discussed later. This is the determination of the propitious moment in time at which to initiate planning action or execute a plan.

Frequency

Frequency of usage of a given plan makes for more likely acceptance by those participating in planning or affected by the plans. Once initial resistances have been overcome, subsequent usage of the plan entails less persuasion than would be necessary were a different plan to be used. Usage allows people to become familiar with their roles in carrying out the plans. It allows them to become acquainted with purposes and the results of the planning. Often it allows them to see that their fears and doubts relating to the plan and their parts in it were unfounded. All of this makes persuasion less prominent in planning than it might be if new plans were necessary to meet each situation. Conversely, frequency of *preparation* of plans entails new persuasions each time.

Plans which are used time after time (often called "standing" plans) tend to become inflexible. That is, after they have been used for some time, company personnel are reluctant to change them. People come to have vested interests in the old way of doing things; long-term commitments are made on the basis of the frequently used plans; new plans will require hard work and mental discomfort. When this has happened, any new plans that are introduced most likely induce considerable resistance unless there is serious dissatisfaction with the status quo.

Note that we have spoken of inflexibility arising through usage. It is important to recognize that such inflexibility is not inherent in frequently used plans, but rather comes about as a result of human reactions to the plans. The plans themselves may be flexible or inflexible.

Confidential nature

Generally, requiring that the purpose and preparation of plans be kept confidential militates against successful persuasion. When one cannot communicate, he cannot persuade. Persuasion takes place only through communication. Secrecy means noncommunication. Secrecy may very well be necessary, but it should be weighed against the problems it creates in gaining the cooperation of other persons in the organization—cooperation which is likely to be necessary at all or most stages in the planning process. Plans are rarely developed in absolute secrecy. Some information gets out. It may be incomplete, biased, or untrue. Rumor may replace fact, and subsequent persuasive efforts are made more difficult since they have first to overcome the obstacles created by the circulation of untrue or incomplete information.

Authorization

Authorization enters the planning process at two important points: (1) authorization to undertake planning, and (2) approval of the final plans. Approval may be self-bestowed where the initiator of the planning action has authority to undertake planning studies, or it may be given by the superior of the initiator. Authorization at higher levels has the effect of helping the planner in his efforts to persuade. Persons occupying superior positions in the organization are better able to bring about cooperation in diverse parts of the company by virtue of their greater formal authorities and their greater influence. A superior-approved plan stands a greater chance of acceptance than one lacking such approval. This is true of both the authorization to undertake planning and authorization to put the final plan into effect.

Formality

Each step in the planning process, from recognition of need to authorization of the final plan, may be performed in varying degrees of formality. The final authorization may require a special meeting of the board of directors, proxies, and signatures of the board members on a legal document. The original study and preparation of this plan may, however, have been undertaken simply and informally by one or a few men working together during some unfilled moments in their workday.

Formality, like specificity, may work either to make persuasion easier or more difficult. Formality lends the weight of official sanction to the planning and plans. Formal plans tend to be more specific and complete, thus aiding persuasive efforts of the planners. But formality also lends it-

self to inflexibility. To the extent that formality brings about an inability to adjust to changing conditions, it makes acceptance of the plans more difficult to achieve.

Ease of implementation and control

Ease of implementation and control facilitates persuasion and acceptance of a new plan; it means that a minimum of time, effort, and cost go into carrying out the plan and measuring performance. The less time, effort and money, the greater the willingness to accept the change. Such ease means a minimal displacement of personnel, minimal relearning of one's job, and minimal rearrangement of one's relationships to other persons, all of which reduces the need for persuasion or facilitates persuasion if it is needed.

Ease of persuasion is a function of significance, comprehensiveness, and complexity of a plan. To the extent that plans are significant, comprehensive, and complex,

persuasion becomes more critical and more difficult
components of the plans are designed specifically to persuade
the planner must base his persuasive actions on other dimensions of the plans
higher levels of management will participate in persuasive activities.

Ease of persuasion is a function of the specificity, completeness, formality, authorization, and frequency of a plan. To the extent that plans are specific, complete, formal, authorized, and used frequently, understanding and, therefore, acceptance are likely to ensue, and inflexibility in the plans may offset other advantages to the persuader.

Ease of persuasion is a function of the flexibility of a plan. To the extent that plans are inflexible, persuasion becomes more difficult; components of a plan will likely be designed specifically to persuade; and the introduction of subsequent plans may require greater amounts of persuasion.

Ease of persuasion is a function of the time element in planning. Persuasion is facilitated to the extent that:

time allowed for preparation of the plans is sufficient to allow full communication
flexibility in the plans allows for changing conditions between approval of the plan and its final execution
shorter-range plans introduce greater degrees of certainty than would long-range plans.

Ease of persuasion is a function of the confidential nature of a plan. To the extent that a plan must be held confidential, communication and, therefore, persuasion are made more difficult, and authority rather than persuasion is relied upon.

PERSUASION IN THE PROCESS OF PLANNING

Persuasive skills are necessary in every phase of the planning process. They are particularly vital, however, in some of these phases such as the data-gathering, approval, and execution stages.

Data gathering

Data gathering is characterized by cooperation. The authorizing executive may order people throughout the organization to give whatever information the planner seeks, but this fails to suffice for two reasons. One reason is that the person authorizing the planning usually has authority which is limited to one segment of the enterprise, while information must be gained from outside his jurisdiction. Another and more important reason is that such an order can be complied with in varying degrees. The planner frequently is not aware of all of the information he needs, he finds this out only through the suggestions given to him by the people from whom he seeks information. Since he is not aware that such information exists, he cannot demand that it be given to him. Also, information can be given fully or partially. When he asks for a particular bit of information he can be told just exactly what he asks for and no more; thus, compliance with the order has been upheld. Or information can be made available to him rapidly or slowly, still complying with the orders received from above. Often the availability of files, minutes of meetings, and other factual data is meaningless in the absence of interpretation by those who are acquainted with the background (context) in which the data were recorded. In a very real sense, persuasion is prerequisite to effective fact gathering.

If the fact gathering involves contacts with many or several persons in the organization, the purpose of the information will be of interest to those who furnish it. In the absence of statements by the planners or their superiors as to the purpose of the fact gathering, rumor will replace fact, and the job of the planner will be made more difficult. Wherever possible, the management must let those concerned know that they will be called upon to participate in the formulation of plans through the giving of information and advice. More than that, they should be informed as to the purpose of the fact gathering and the plans of which the facts become a part. There may be occasions upon which this rule cannot be observed. Plans may call for changes which, if known beforehand, could seriously compromise the company's competitive position or call forth unnecessary resistances within the company. Premature disclosure of the plans, before the management is prepared to answer the many important

questions that will be asked, can contribute to the failure of the plan. Therefore, it is not always possible to give full and forthright information about the reasons for fact gathering to all of those who are asked to furnish data. There are no rules for when to divulge and when not to divulge; this is a matter of judgment. Within the bounds of necessary secrecy, however, the rule ought to be as complete an explanation as possible early in the planning process so as to elicit the maximum in cooperation.

Obtaining final approval

Approval of the final plans is another critical area for persuasion. Sometimes, this is a simple matter of convincing one's boss of the appropriateness of the plan. At other times, it becomes more complex when approval must be forthcoming from a group such as the budget committee or the board of directors. Sometimes, such approval is issued by one man but other persons close to him influence his judgment. It then becomes necessary to convince these persons of the desirability of accepting the plans. Knowing *whom* to convince is the first step in obtaining approval.

Persuading superiors is a little different from persuading other persons in the enterprise. In this case, the planner obviously has no authority and must rely totally upon his ability to persuade. He cannot count upon an aura of expertness that frequently aids him in persuading others, since the superior will very likely have little in the way of awe for a subordinate. Superiors are more likely to react logically and less emotionally to the arguments given than other persons might be since they have demonstrated their abilities to evaluate a proposal on its merits. This does not mean that they are free from emotional involvements, only that they are less influenced by emotions than other persons might be. Also, superior executives have demonstrated a predisposition for change. By and large they are not characterized by a clinging to the status quo, or they would not have risen to their present high positions. This predisposition for change and for logical evaluation aids the planner. His job becomes one of so presenting his case that the superior approves this plan rather than some alternative course of action.

Execution of plans

The planner is successful only insofar as his plans are actually put into practice. He is vitally concerned with the implementation of his plans. He does not merely present his plans to the relevant superior, then wash his hands of them, considering his work done. Since he has worked on developing the plans, he has knowledge that is vital to their execu-

tion. Often, he is called upon to observe the plans as they are being carried out, suggesting changes or modifying schedules as the work progresses. Because of his greater knowledge of the plans and the backgrounds giving rise to them, the planner is in a better position than most others to influence those persons who are charged with the carrying out of the plans. Often, however, the advantage he holds is only one of depth or superiority of knowledge. He may have other attributes which detract from his effectiveness as a salesman of the plans he has developed. He is often "from the front office"—an outsider who neither knows nor understands the problems of the front-line employee or executive. He is a man whose stock-in-trade is change. Without it he would be out of business. He has a personal interest in promoting change and may tend to promote change even though it be detrimental to other parts of the company. He sometimes wants information that could be embarrassing or harmful to a particular department or to persons in that department. He takes little responsibility should the plans fail, charging the failure to inept execution.

In spite of these possible handicaps, there are some steps the planner can take to help promote his plans.

CHANGE AND THE INDIVIDUAL

Sometimes a plan calls for a continuation of present behavior and relationships. More often, however, a plan represents a change from the status quo. Generally the planner is asking someone to change what he does, the time he does it, or the way he does things. Plans mean change. Thus we address our attention to how planners can help persuade others to do their parts in bringing the plans to fruition—to change.

When the planner asks people to change their behavior, he is really asking two things: to accept and learn the new, and to unlearn the old. It is just as necessary to accomplish the latter as the former. Actually, helping them to unlearn and to learn may or may not be the task of the planner. If the planner is a line executive who will carry out the plans, he will also have responsibility for helping his people learn the new and unlearn the old. If, however, the planner is a staff specialist, he will probably have to bring about the learning through the line superiors of the persons who must relearn their jobs.

It is important to give the employee incentive to learn the new method and to accept the new relationships which evolve under the plan. In the past, he has been given to understand that certain kinds of behavior will bring rewards and that other kinds of behavior will not. Some of this will change under the new plans. For example, under former conditions of

centralized organization, an executive was considered to be functioning effectively when he decided all important questions himself, when he required that he be consulted before subordinates made any significant decisions, when he hired the people who worked under his subordinates, and so on. Under a new plan of decentralization, this behavior becomes unacceptable. The executive must be made to understand that henceforth this kind of administration on his part will work to the detriment of the firm and that he personally will not be rewarded if he continues in this vein. On the more positive side, he can be given motivation for learning new behavior by pointing out to him the reasons for decentralization and specifically how he might act in the future to fit into the new organization picture.

Geographic dispersion, increase in size, and desire for executive development might be reasons behind the plans; clues for his own behavior might be found in statements that he should allow his subordinates to make more important decisions (specifying some of them), review their decisions after rather than before they are made, act more in the role of advisor, and allow subordinates to discover their own problems as well as the solutions to the problems. To accept the change requires that he understand fully what will be expected of him. More specifically, it requires that incentives for the old behavior be removed, that incentives for the new behavior be given, and that the employee concerned be fully cognizant of these changes in rewards. More than this, he must be given some standards by which he can determine when he is doing well under the new setup, and when he is performing ineffectively. At the higher levels of the organization, such standards may be extremely ambiguous, but they ought to be specified insofar as possible.

Anxieties often develop when an employee is asked to change. He has spent some time in getting to know what is expected of him. He has come to know his boss and his subordinates and what they consider to be approvable actions on his part and what kind of activities they frown on. The planner sometimes asks him to change all this for something unknown—a new boss, a new work method, new tools, strangers with whom to work, a different work location. He is not sure he can get along with the new boss, that he can work the new machine, that he will like the new location. He might make the change successfully, but he also might not. Therefore, "why change?" he asks. The planner can help to relieve this anxiety by letting him know, as clearly as possible, what will be expected of him under the new situation, *and* by assuring him that he will have time to adjust himself to the new situation. A demonstrated understanding of the problems of change will do much to help him make the transition. To the extent that the planner can help to relieve such anxieties, he furthers his plans.

Further help can be given through special training sessions. If a plan for organizational decentralization such as that mentioned above were to be implemented, affected personnel might be brought together in orientation sessions. Perhaps the executives might be helped to understand their new roles by use of case problems or role-playing situations. This might be supplemented by an organization manual with specific position descriptions. If the plan included a change in equipment, the employees could be given special training sessions in the operation of the new machines and special attention and understanding on the job before and during the transition.

The planner furthers the acceptance of his plans and cooperation in developing them to the extent that he can carry out the following procedure:

make clear the reasons for change
make clear the new behavior that is necessary
provide incentive for the new behavior and discouragement of the former
give retraining help
allow adequate time for transition
demonstrate sympathetic understanding of the problems of change.

An important research work helps us to understand how the planner can create an environment in which his changes will be accepted. This study has been reported in *Administering Changes* by H. O. Ronken and Paul R. Lawrence of Harvard University.[9] The lessons learned in this study are extremely useful to the planner who would effect change.

The researchers found that a technological change of a physical variety —the development of a new product—encountered resistances and problems which grew primarily out of the changes in interpersonal relationships that arose because of the change. There were purely technical problems, too, but the critical variable throughout the research was one of changing personal relationships. "It was these changes in relationships, rather than the physical, tangible, external changes, to which people chiefly responded."[10]

"Everyone . . . brought to the situation a picture of himself in relation to the world, a way of interpreting his experiences, a set of feelings, assumptions, and expectations—in short, a frame of reference from which he looked at the world."[11] Where people with similar frames of reference were brought together, cooperation tended to ensue. Where dissimilar frames of reference were brought into contact, people reacted by minimiz-

[9] H. O. Ronken and Paul R. Lawrence, *Administering Changes* (Boston: Harvard Business School, Division of Research, 1952).
[10] *Ibid.*, p. 293.
[11] *Ibid.*, p. 294.

ing contact with one another. Dislikes and suspicions arose, ideas were resisted, and progress on the project was impeded.

This does not mean that progress can be made only where people have the same attitudes, assumptions, and experiences. Rather, this research tells the planner that where such differences in viewpoint exist, it is all the more necessary to somehow establish an atmosphere in which people are willing to listen sincerely to another's ideas, to modify, compromise, integrate, or hold tight to their convictions without fear of censure if their beliefs stand up in the light of intensive scrutiny.

Communication, and therefore change, were facilitated when there was someone in the situation who recognized and understood his own frame of reference, understanding how it affected his perceptions of the situation—someone who recognized that others had differing frames of reference and that he must somehow come to understand these if he hoped to communicate effectively with them. Accurate communication occurs only when expressed in terms meaningful from the standpoint of the communicatee. For the planner, this means that he must become self-aware if he hopes to succeed in bringing about change. In order to persuade, one must communicate, and in order to communicate, one must be aware of one's own perceptions and their differences from the perceptions of others, then compensate for these differences in his attempts to persuade.

"People did not change under threat; their attitudes and behavior were modified most rapidly and most effectively in an atmosphere of acceptance."[12] They tended to defend their opinions and actions more vigorously when they felt on trial. Being accepted for what they were gave them the confidence that was needed to say to themselves, "I can admit to being wrong," or "I may change my opinion here without suffering embarrassment." They reacted favorably to change only when they were told (by actions rather than words) "Although I do not agree with you, I respect your opinion and its merits, and I do not think less of you as a person because of our lack of agreement." It was this atmosphere that allowed the participants to reexamine their own thinking and sometimes to change it.

This has an important lesson for the planner. What can he do to foster this atmosphere of acceptance? "It was largely through small groups that there was communicated that . . . feeling of acceptance which allowed the individual to recognize that his way of looking at the world was not the only way and perhaps even to make some changes in his way. . . ."[13] This indicates that the planner should be cognizant of the informal groups that exist and to see that his plans minimize disruptions to these existing

[12] *Ibid.*, p. 318.
[13] *Ibid.*, p. 300.

relationships.[14] Where they must be disrupted and new groups established, the planner may be able to help the persons involved to make the adjustment by instilling in them a sense of purpose.

Timing of change

Timing is a critical element in persuading people to accept change. What is not acceptable at one moment in time may become so at another moment. Increases in dividends while workers are on strike, sweeping reorganizations while unemployment threatens, introduction of labor-saving machinery while workers are being laid off are examples of change undertaken at inappropriate points in time. They might be appropriately undertaken from a purely economic point of view, but their timing would make enthusiastic acceptance of them extremely unlikely and difficult. A "sense of timing" which makes for successful planning is not just a matter of intuition. Rather, it is an ability of the planner to understand the position of the persons affected by his plans—their needs, fears, points of view—in short, their frames of reference. When he achieves this understanding, he will know how they will react to his proposals and whether or not the moment is propitious.

Participation in the planning process

While participation does not insure acceptance, there is considerable evidence from observation and research that leads to the conclusion that people derive satisfaction from carrying out a decision that they have helped to make, and that their motivation to implement the decision is directly related to the influence they exerted on the decision. The desire for participation arises for several reasons. Sometimes, this felt need springs from the organization itself, from the necessity to share some scarce resource, or from the interdependence of timing of activities.[15] Sometimes, those who participate in the decision-making do so out of a need to become less dependent upon superior authority. Sometimes, they want to shape their own actions rather than have someone else shape them for them.[16] The planner would do well to take advantage of this

[14] For an earlier study showing the importance of social groups to working effectiveness, see Elton Mayo and George F. Lombard, *Teamwork and Labor Turnover in the Aircraft Industry in Southern California* (Cambridge: Harvard University Press, 1940).

[15] See James G. March and Herbert A. Simon, *Organizations* (New York: John Wiley & Sons, Inc., 1958), p. 122.

[16] However, not all persons have the same need for participation or derive the same satisfaction from it. A study of supervisory participation carried out under the auspices of the University of Michigan's Institute for Social Research indicates that "authoritarians and persons with weak independence needs are apparently unaffected by opportunity to participate." See Victor H. Vroom, *Some Personality Determinants of the Effects of Participation* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1960), p. 60.

natural and general tendency for people to want some control over their own future actions. Participation in the planning process can be an extremely useful aid to him in his attempts to influence behavior.

The image of the planner

The planner should realize that he is a "merchant of change" and that he is perceived as such. He should not consider others as impediments to progress, but try to understand their points of view. This is true of all business administrators, but the planner finds it even more vital, because only through this can he gain the mutual "atmosphere of acceptance" that will allow people to undertake the desired changes. He should realize that he very possibly represents the authority that goes with higher management, that he can represent a potential and undesirable alternate channel of communications to the boss, that he threatens to change existing conditions for something relatively unknown. So long as he is perceived as an informer or an evaluator, reactions to him will be in the form of defending present positions, attitudes and actions. The behavior of those he would influence depends in large part on how they perceive him—who he is, what he does, and what he says.

The value of the familiar

It is extremely important and valuable for the planner to recognize that holding to old beliefs and behavior has a very useful purpose. He should not look upon reluctance to give up these old ways of living and working (the word "living" is used advisedly since one's work is indeed an important part of one's life) as mere stubbornness or ignorance. Old beliefs and customs fit in with the picture the individual has of himself. He has established what he considers to be self-approvable conduct for such a person as he perceives himself to be. He understands what others expect of such a person. In short, it is by means of familiar impressions and signals that he is able to relate himself to other people and to the world around him, to solve the problems that confront him daily. Clinging to old habits *is* useful. From the *planner's* point of view it might be unsound, economically, socially, or politically. But from the other individual's point of view, holding to prior beliefs, attitudes, and customs is extremely logical and utilitarian—even though it may not be expressed in logical and utilitarian terms. For *him,* holding to prior ways means that he is able to maintain a consistent picture of himself, to know what others expect of him and vice versa, and to feel comfortable in the relationships he has established. What could be more logical, more useful than this? It all depends on whose values are used in judging his reluctance to change. To be cognizant of this value that others place in holding to old practices

and beliefs is really essential to anyone who hopes to promote change by means of persuasion.

True cooperation and acceptance of plans, then, is most likely to ensue when:

it is recognized that most resistance stems from changes in interpersonal relationships
the planner takes care to minimize disruptions of these relationships when they will contribute to his purpose
persons with similar frames of reference are brought into contact in planning
threat can be minimized and a feeling of acceptance generated
participation in the planning process is encouragesd
the planner presents an image of himself as a source of help
the planner recognizes the usefulness of holding to present beliefs and behavior.

These generalizations hold true whether the planner is authoritative, i.e., can "order" someone to give information or carry out the plan, or whether he must rely on his ability to persuade, because, in the end, all authority in business firms in a free society must be persuasive.

The planner can do more than merely refrain from disturbing the beneficial interpersonal relationships that exist or promote the atmosphere of acceptance that comes about in small groups. He can actively use the groups as media of change. Groups are very powerful forces in the business enterprise. Resistances to change may be personal in nature, but they are vitally conditioned by the groups in which the individuals work. A second research work gives us valuable insight into how the planner can utilize the group as a medium of change. This work, *Cultural Patterns and Technical Change* is edited by an eminent anthropologist, Margaret Mead.[17] The section below is based in part on this study. Its conclusions have been interpreted and applied specifically to planning.

EFFECTING CHANGE THROUGH GROUPS

We have been discussing the interactions of the planner who is trying to see his plans developed and implemented successfully and the person he would like to influence. But these two persons do not exist by themselves. The planner in fact must influence many persons, and the person he would influence exists, not by himself, but as a member of one or more groups within the organization. These groups play an important part in the behavior of the individual, and the planner would do well to understand them if he wishes his plans to succeed.

[17] Margaret Mead, ed., *Cultural Patterns and Technical Change* (Paris: United Nations Educational, Scientific, and Cultural Organization, 1953). See Chapters 5 and 6.

Harmony in goals

Earlier in this book, we indicated that plans usually exist in "nests" or hierarchies. Each step in a major plan becomes a subplan. The subplan then has as its major goal the accomplishment of a given portion of the over-all plan. Let us take an example. A plan to build a new branch plant might include, among others, the following steps:

1. Choosing a location
2. Design of the building and equipment
3. Financing the new facilities
4. Staffing the new plant
5. Fitting the new installation into the organization structure.

Each of these major steps must in turn spawn a subplan which is necessary to its accomplishment. Choosing a location, might require a plan calling for such actions as:

a) a survey of the labor market
b) an analysis of freight rates
c) choosing a specific site within the general locale
d) a local market survey.

In turn, each of these steps becomes the goal for a subplan. Step "c" above, for example, might include:

1) checking zoning restrictions
2) determining variations in ground level on the site
3) checking for waste disposal and drainage potential.

Each of these steps, again, can be broken into subplans.

It is important to the success of any plan that these subplans have goals that are compatible with the over-all plans and with each other. This is not always the case. Very often groups charged with responsibility for subplans have goals that are not in keeping with the over-all plan.

This often happens imperceptibly, insidiously. An example will illustrate. The United States has established a plan to aid underdeveloped countries. Assume that its goal is purely humanitarian—a better life for the peoples of other nations. The over-all foreign aid plan includes stipulations as to the total amounts to be spent, which countries shall receive aid, and what general proportion of the money shall go to a given country. For each recipient country, then, a subplan is developed. The subplan will call for specific projects—establishment of a medical school, a sewage system, a dam for generating hydroelectric power. But let us further assume that the Americans assigned to the recipient country possess a patriotic zeal to promote the interests of the United States in its conflict with opposing political ideologies. They construe their purpose

to be the gaining of friends for "our side." The group of persons responsible for designing and carrying out the subplan has developed a goal which may conflict with the goals of the over-all plan. Quite different kinds of decisions will be made where the goal is considered to be the winning of friends. For example, it is very likely that a power dam to be located 2,000 miles from the population centers will be turned down in favor of the construction of apartment buildings, swimming pools or roads in the populated areas—even when the true interests of the country lie in the creation of capital-producing facilities such as the dam.

In this example, there is a fine line between winning friends on the one hand and promoting the development of the recipient country toward a better life for its people on the other hand. It is very easy to stray from the original purpose of the master plan. The same is true in business. Plans and their goals very easily become misinterpreted or altered. When this happens, it can result in the establishment of opposing groups, setting off unnecessary conflicts. It is seen in field versus home office problems, staff versus line, sales versus production, newcomers versus oldtimers. The "selling" job of the planner becomes incomparably easier when the groups at various levels of planning have common objectives, that is, where the subplans have goals which are in keeping with each other and with the master plan. Where this condition exists, the planner has fewer problems of resolving conflicting points of view held by different groups within the enterprise. If this were to be stated in the form of a rule or a principal, it might be as follows: Where the goals of the master plan and the subplans are harmonious and complementary, the amount of persuasive effort on the part of the planner is minimized. This seems to be self-evident—where there is agreement persuasion is unnecessary—but it is much more complex than it might seem, and certainly it is of such great importance as to warrant specific attention.

Generating change from within the group

Those who seek to influence others can do so by helping to establish a shared feeling of need for change within the group, thus causing the group itself to exert pressures for change. To the planner this means that his work has greater likelihood of success if he can create a cognizance of the need for change within the group of persons who will carry out his plans or will participate in their development. The advice sometimes given to "make them think it was their idea," however, is frequently unsound. It is one thing to create an environment in which people are encouraged to think about improvement, an environment in which they feel secure in suggesting change. It is quite a different thing to hint at things

you would like done in the hope that someone will take up the idea and "sponsor" it. If done much or over a long period of time, the persons in the group begin to sense the insincerity of the planner. It may lead to feelings of being manipulated, and this, of course, works to the detriment of the plans.

When change is generated from within a group, the change can be anticipated and responded to by its members. When the change is introduced by some outside or "foreign" person, these adjustments come less slowly or may not come at all. When the foreman on a production line discusses relocation of the conveyor belt with his workers and colleagues, then develops plans to bring this about, other side-effect-problems are foreseen and compensated for; these might include problems of relocating the tool crib, of providing adequate light, of locationally separating two antagonistic operators, the breaking-up of informal subgroups, and so on. However, when this change is brought about as part of a plan designed by someone outside the group—a consultant, higher-level management, or anyone else outside the group immediately concerned with the execution of the plans—compensating behavior necessary to maintain equilibrium and productivity in the group is likely to be retarded. The result can be the creation of new problems at least as serious as the old. In this case it could be poor manpower utilization because of tool crib location or serious human relations problems among the operators on the production line. It is possible, but not probable, that these side-effects can be anticipated and allowed for by an outside planner.

Sometimes, it is necessary that outsiders do the planning. Since they may be unable to foresee all of the problems resulting from their plans, it is important that they receive immediate and accurate information as to the results of their plans. That is, there must be a rapid feedback of information on the effects caused by the plans. Without this feedback, a great deal of harm might be done both to the plan itself and to the people who are affected by the plan. This feedback will be important without regard for who developed the plans. *Insiders,* however, are more likely to have anticipated the reverberations of the plan and perhaps their need for information is slightly less than the outsider's.

"Trial runs" or "pilot plan" operations are means of preparing for unforeseen ramifications of a plan. If outsiders do the planning, they may find it advisable to implement the plan in only a small portion of the organization, feeling their way slowly at first. Then, as they learn, getting their feedback, they can capitalize on their mistakes when they apply the plan more broadly.

Acceptance of change is facilitated when the members of the group are able to generate their own changes. Denied this, the members of the

groups affected should at least participate in the planning that takes place affecting them—even though the impetus for change comes from outside the group.

Participation in the planning process

If members of the group who are to carry out the plans themselves do the planning, then they will be implementing *their own* beliefs, restructuring their own activities in accordance with the goals established in the plan. This is the strongest argument for the marriage of planning and performance. It is not necessary that *all* those who will execute the plans participate in developing them. But it is important that the group have representation. Its members must feel that their interests were looked out for in the planning. One of their own people is in a far better position to explain and to elicit cooperation than is an outsider. If such a person or persons have been included in the planning itself, subsequent persuasion comes much easier.

Like most generalizations about business life, this one must be qualified. There are occasions in which it is most useful to have no insiders involved in the planning. Sometimes, the issues are so delicate that no one from within the group possesses the requisite objectivity. Or perhaps the information being gathered in the planning process is such that those furnishing information would be reluctant to provide it except to a "stranger" who has no immediate connection with the department or firm and who at least has an appearance of objectivity. Any information which is critical of the boss might fall in this category.

With this qualification, however, it is advisable to include in the formulative steps of planning as many as possible of those persons who will have to carry out the plans and who will be directly affected by the plans.

Often, the planning group will include planning specialists and plan-affected persons. In addition to these two groups of persons, it is desirable that the planning team include some neutral membership. The function of such representation is to add objectivity to the deliberations. It can add balance between those proposing change and those who will be affected by the change. This can be an effective factor in the reaching of mutually acceptable decisions and in gaining cooperation for carrying out the decisions once they are reached. Support of a proposal by someone who has nothing to gain or lose through its adoption lends weight to the argument for change. Often, planners are suspect. The line executives feel that the staff planners have something personally to gain by putting through their plans and that changes proposed by staff people have proved to be to the disadvantage of line personnel. On the other hand, staff planners sometimes look upon line managers as lacking vision, being stubborn, and

holding back progress. Whether or not such distrust exists, the inclusion of neutral and objective persons in the planning group generally contributes to the acceptance of the plans. The inclusion of such persons frequently has the further advantage of injecting fresh and novel ideas into the planning.

Implementation within the group

The plan should be implemented by someone within the affected group who is convinced of the desirability of the change. This has the advantage of having someone promote the plan by utilizing the beliefs and attitudes of the group as a vehicle. A branch plant could be brought within a plan by means of having, say, the plant superintendent play the role of the persuader. He can point out, for example, that the plan will allow for reduced interference from and dependence on the "home office." These same words coming from an outsider, particularly someone attached to the home office, would have a hollow ring. But couched in terms of the attitudes and beliefs of the people working in the branch plants, it becomes acceptable.

All this, of course, is part of the advantage derived from having someone known and trusted by the group bear the burden of convincing the group members. It is desirable that the persons so selected be influential, that is, that they have both positions and personal characteristics conducive to persuasion. It is not always true that the higher the position the more influential the person. Some kinds of plans might very well be implemented best by persons of lesser authority. Generally, a higher position in the organization structure tends to give its incumbent greater influence. We have already mentioned some of the personal characteristics the planner might ideally possess in his persuasive pursuits, and these same characteristics hold true for persons charged with the gaining of cooperation in implementing the plans.

In addition to having appropriate status and personal characteristics, the person selected to convince the group of the desirability of change must himself be sincerely convinced of the need, otherwise the lack of sincerity, if not of enthusiasm, will surely be communicated to and among the group. The greater his belief and confidence in this desirability, the greater will be his chances of success in persuading others. (There are limits to this. He can become fanatical in his beliefs, and this makes him less valuable as a persuasive medium.) Again, he should come from within the group, and both he and the members should have a strong sense of belonging to the group and should identify their personal interests with those of the group. The feeling that "I am one of the group," and "he is one of us" does much to smooth the way for successful persuasion.

Changes involving group disapproval

Group approval is an extremely strong motivation for human behavior. If the planner wants a man to perform some action or advocate some change which runs counter to the beliefs of his group, he has a very difficult task on his hands. The most likely courses of action lie in giving the man sufficient incentive to warrant bearing the disapproval of his colleagues, or of convincing the entire group (or a large part of it) of the desirability of the change. In any event, planning which involves changes which call forth group censure are potentially explosive, are likely to meet strong resistance, and are best introduced gradually. They should have a maximum of acceptable change embodied in them to minimize objections to the undesired changes proposed.

Inclusion of desirable changes

The planner can reduce the resistance to changes induced by his plans if he includes some changes which will be considered desirable by the persons affected. In this way, the "undesirable" changes can ride on the coattails of the desired ones. For example, the installation of a job evaluation program can be tied in with a general increase in wages, making the evaluation program more acceptable. The greater the preponderance of desired changes in a given plan, the less resistance is likely to be experienced in gaining acceptance in those parts of the plan considered to be disadvantageous. Persuasion then is built into the plan itself.

Gradual changes

Plans introduced gradually will tend to disrupt fewer lives and engender less resistance than will those that are applied drastically. Very often, mankind accepts gradually what it would never accept at a given moment. If a labor union were to demand that wages be raised by 30 per cent in the forthcoming three years, the employer would almost certainly fight back with everything at his disposal. The same employer might grant three 10 per cent wage increases grudgingly but with a minimum of real resistance. To triple postage rates today would cause national indignation. To accomplish the same thing in small increments would result in only token resistance. If the planner asks the production department to allow the personnel department to recruit, select, and train new employees, he may fail. If, however, he asks that the personnel department recruit applicants after which the production department will select from among them, he is more likely to find approval. Later on, it may appear evident and logical that the personnel department should screen out undesirable candidates. Still later, it might be shown that per-

sonnel department help in training can effectively reduce the work load on production supervisors. The first proposal asked too much—too abrupt a change in the status, activities, and thinking of the production people. Done in stages, the same thing might be accomplished harmoniously. As indicated earlier, any change calls for adjustments to be made. Adjustments take time, and more gradual changes allow time for them to be made.

It is not always true that moderate and gradual change promotes acceptance. There are situations in which gradual action works to the detriment of the enterprise. A plan, for example, involving the discharge of a half-dozen major executives over a one-year period, if implemented gradually, could cause morale reverberations throughout the company. In this case, it might be advisable to take more drastic action, letting them all go at once if by so doing the company could communicate to its personnel that the action was final and that no further discharges were in the offing. Otherwise remaining executives would be left wondering, "Am I next?" Where the change can be construed as a threat, it is necessary to take positive action to offset the threat.

GETTING MANAGEMENT SUPPORT

The planner's job of persuading others will be made easier to the extent that he can communicate to them that his superior and, hopefully, *his* superiors are in agreement with what he is trying to get accomplished. If he can go farther than this and indicate that they are enthusiastic in their support of his efforts, he has an additional factor in his favor. If he can go an additional step farther and have the superiors themselves communicate their enthusiastic support, he has gone a long way toward successful persuasion. This communication, of course, may not be enough. Business experience shows many examples of top and middle-management support for projects that have gone sour because of resistance down the line. This step, communicating superiors' support, is an extremely important one, but it is only one of many steps necessary to effective persuasion.

SUMMARY—GUIDELINES FOR THE PLANNER

Complete and accurate communication is prerequisite to persuasion, but it is not enough. Motivation must be given to unlearn the old and to learn the new. Authority may be exercised in some situations, making persuasion unnecessary, but, in the end, even authority must be persua-

sive. So long as a free society exists wherein people may leave the firm, persuasion will continue to be more important than authority in promoting change.

The extent to which persuasion is necessary or is used is a function of the complexity, significance and comprehensiveness of the plans, the use of specialists in planning, the timing of the plans, the extent to which plans call for a departure from present practices, and the preponderance of undesired over desired changes embodied in a plan.

Persuasion becomes more necessary and important to successful planning as:

the plans become more complex, harder to understand

the plans become more comprehensive, affecting more people

the plans become of greater significance to the firm

specialists are used in the planning process

desired changes incorporated in the plan are outweighed by undesired changes in the view of those affected

the timing of the changes makes them less readily accepted.

Ease of persuasion is a function of the specificity, completeness, formality, authorization, and frequency of a plan. To the extent that plans are specific, complete, formal, authorized, and used frequently, understanding and, therefore, acceptance are likely to ensue, and the plans may become less flexible.

To the extent that plans do become inflexible,

persuasion becomes more difficult

components of the plans may be established for the specific purpose of persuading

subsequent changes in the plans will require greater persuasive efforts

higher levels of management will participate in the persuasive activities.

Ease of persuasion is a function of the time element in planning. Persuasion is facilitated to the extent that:

time given for preparation of the plans is sufficient to allow full communication

flexibility in the plans allows for changing conditions between approval of the plan and its final execution

shorter-range plans introduce greater degrees of certainty than would longer-range plans.

Persuasion is facilitated to the extent that planning and plans can remain nonconfidential.

When the planner proposes change, he is really asking someone to do two things: to unlearn what he has been doing or the way or time he has done it, and to learn the new. Any real change in the work of a person introduces a degree of instability or disharmony into his life. The planner can offset the deleterious effects of this instability to the extent that he:

can explain fully the reasons for change

gives incentive for new responses and removes incentive for the old

provides help in learning the new ways

allows time for the transition from old to new

understands the value in holding to the old and demonstrates a sympathetic understanding of the problems of change.

Resistance stems less from tangible physical changes than it does from intangible changes in interpersonal relationships. Problems dealing with the design of a product, the layout of a workplace, the chemical content of a raw material engender less resistance than accompanying changes which deal with "Who will work next to whom?", "Who will cooperate on the project?", and "Who will be the new boss?". The planner will minimize or overcome resistance to the extent that he:

can minimize disruption of well-established beneficial interpersonal relationships

brings people together whose frames of reference are similar

presents an image of himself as a source of help

promotes broad participation in the planning decisions

minimizes threat and generates a feeling of acceptance.

Humans change more readily when they are not threatened, are not on trial, when they can change without suffering loss of esteem. This feeling of acceptance that allows change to take place is usually generated in small groups. There are actions the planner can take to foster such groups and therefore to foster the acceptance of change. Groups become more effective as media of change as:

they and their subgroups have harmonious, well-understood goals

a shared feeling of need for change is generated within the group

the impetus for change comes from within the group

those affected by the plans share in the preparation of them

plans are implemented by someone within the affected group.

Additionally, the planner gathers support for his proposals to the extent that he:

includes in the planning third parties who are not affected by the plans

can install the plans gradually, avoiding abrupt shocks

gets full and enthusiastic support from his superiors and the superiors of those who develop and carry out the plans.

Part V

INTEGRATING PARTS

into general theory of planning

In Chapter 12 we bring the various theories covered in other chapters of the book together into a general theory of planning. These separate theories cover need determination, choice, data collection and processing, testing, communication, persuasion and organizing.

Next we establish principles of planning by referring to the 13 dimensions of a plan. These are complexity, significance, comprehensiveness, time, specificity, completeness, flexibility, frequency, confidential nature, formality, authorization, ease of implementation and ease of control. For each dimension, a separate set of principles is developed.

We also discuss the principle of interrelation of dimensions and the principle of primacy of dimensions. The chapter ends with a look into the future and with suggestions for expansion of fruitful research in several areas of planning theory.

12

SUMMARY AND CONCLUSIONS

NOW THAT WE HAVE COMPLETED our analysis of the many facets of the planning concept, it is appropriate for us to restate our central theme and to formulate some general conclusions in the form of theories and principles.

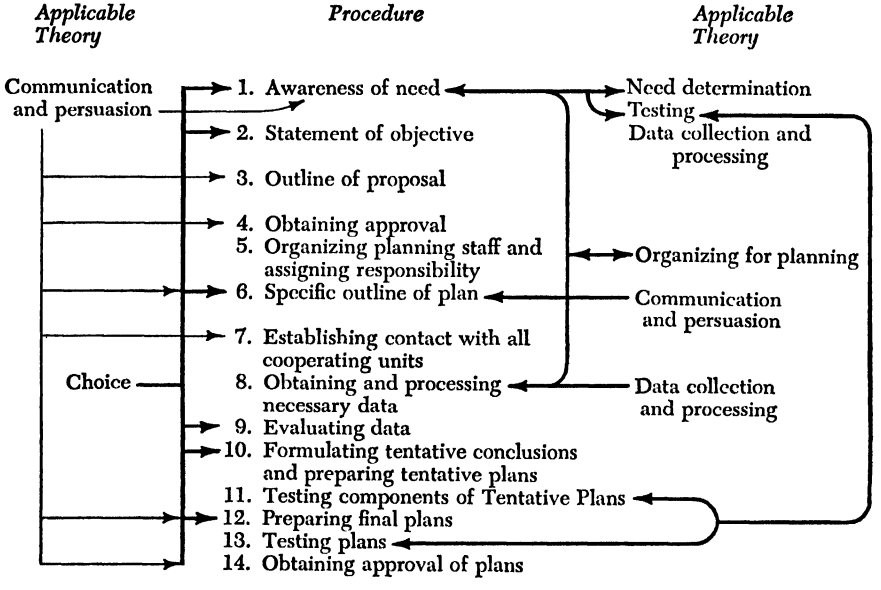
The central theme of this book is that the task of the executive is one concerned with the preparation, implementation and control of a fairly large variety of independent and interrelated plans. One of the most important functions performed by each executive is that of planning. The determination of a suitable organization structure, manpower budget or program of controls requires planning, as do all other activities.

There are logical steps and guides that can be followed in the preparation of all plans. We refer to this as a planning procedure. Further, each plan is made up of 13 dimensions which greatly influence the planning process. We suggest that the implementation and control of plans can be greatly facilitated

by the kind of planning and action which takes place during the preparation of a plan.

Lastly, we note that certain new techniques introduced by behavioral scientists, economists and mathematicians have opened new horizons to the planner and new complications to the enterprise. Some of these new techniques have influenced the organization placement of the planning function and increased the tendency to separate planning from performance. These newer techniques have also introduced new staffing problems as well as problems of communication and persuasion.

The development of a theory of planning might best be approached by studying the major components of a plan as semi-independent units as well as interdependent units. The various steps in planning along with the name of the theory most appropriate for each is outlined below. Quite obviously, the assignment of a given theory to one or more steps in the procedure can be done only in a general way to signify emphasis.



SUBTHEORIES OF PLANNING

Over-all planning theory can be divided into seven convenient subtheories:

Theory of need determination
Theory of choice

Theory of data collection and processing
Theory of testing
Theory of organizing for planning
The role of communication theory in planning
The role of persuasion theory in planning

The theory of need determination has its greatest impact on the first step in the planning procedure, awareness of need. The theory of choice is of particular relevance to the following steps: awareness of need, statement of objective, specific outline of plan, evaluating data, formulating tentative conclusions and preparing tentative plans, and preparing final plans. The theory of data collection and processing has its main impact on awareness of need and obtaining and processing necessary data.

The theory of testing is of greatest importance in awareness of need, testing components of tentative plans and testing plans. The theory of organizing for planning relates specifically to organizing planning staff and assigning responsibility. The theory of communication and the theory of persuasion have their greatest impact upon awareness of need, preparing broad outline of proposal, obtaining approval, formulating a specific outline of plan, establishing contact with all cooperating units, preparing final plans, and obtaining approval of plans.

By analyzing each of the subtheories, the groundwork will be set for the development of an integrated theory of planning.

Theory of need determination

The recognition that a need exists for at least considering the feasibility of preparing a plan or modifying it is the foundation upon which the entire planning process rests. Need for a plan is a function of the total objective of the unit, the suitability of the existing plan, and the level of performance of the unit.

An executive may become aware of the need for possible action by use of formal controls, systematic audit, unit demonstrating need, employee suggestions, outside initiative, perpetual checks, management observations and contemplation, management orders and suggestions, and orders and suggestions from members of the board of directors.

The theory applying to each of these sources of ideas can be stated in the following fashion:

The greater the use made of controls and systematic audits, the greater the likelihood that:

all important areas within the company will be covered by plans

plans will be prepared in time to avoid unnecessary loss due to tardiness in formulating them

automatic decision rules or substitute plans will be prepared to correct or replace plans that prove inadequate.

To the extent that a planner has not anticipated an act and thus has not taken certain precautionary measures in advance, there is a greater likelihood that:

an emergency plan will be prepared

all important facts will not be considered in formulating the plan

the company will suffer some significant loss during the planning period.

The greater the number of ideas indicating the need for planning which come from employees and outside sources, either through their own initiative or the initiative of management,

the greater the possibility that problem areas will be considered before the situation becomes excessively difficult

the greater the need to screen suggestions and proposals

the greater the likelihood that employees will be brought into the planning process.

The greater the use of specialists as a source of new ideas,

the greater the problem of communication between participants in the planning process

the greater the likelihood that the company will be kept informed of significant developments

the greater the dependence on specialists for the implementation and control of plans.

The greater the use made of executive observation and contemplation as a source of ideas, the greater the likelihood that:

plans will be formulated to cover most of the important areas within the company requiring plans

planning will be preventive rather than corrective in design

the planning process will be fairly unique for any given plan

the need for special care at crucial stages of the planning process will be greater in regard to formulating a precise statement of objective of plan, preparing a broad outline of proposal, organizing the planning staff, establishing contact with cooperating units, testing components and completed plan, and obtaining approval of the plan.

The greater the use made of suggestions from managers the greater the likelihood that:

all significant areas will be covered by plans

planning will be preventive rather than corrective

time will not be a critical factor in the planning process

it will be important for the planner, for his personal guidance, to take special care to formulate a precise statement of the objective of the plan.

The greater the use made of directives from superior managers as a matter of company policy, the greater the likelihood that the planning process will follow a rather formal and routine procedure, and the man-

ager responsible for preparation of the plan will increasingly depend upon his superiors for initial guidance and direction.

The greater the use made of suggestions from members of the board of directors or the board as a unit the greater the likelihood that:

a fairly significant area of company operations will be covered by the plan
it will be important for the planner to take special care to formulate a precise statement of the objective of the plan
it will be fairly easy to gain cooperation at various stages of the planning process, such as participation on the planning staff, obtaining necessary data, and testing components and final plan
special care will be taken in preparing and testing final plans.

The greater the use made of directives from the board of directors, as a matter of company policy, the greater the likelihood that the planning process will follow a rather formal and routine procedure and the manager responsible for preparation of the plan will increasingly depend upon his superiors for initial guidance and direction.

To the extent that an executive uses the various means (other than unit demonstrating need) of becoming aware of new planning demands,

a greater part of his daily work will be concerned with interpersonal communications
the total initial planning time is increased but the results are usually superior
he should be more inclined to delegate authority for performance of routine matters.

Once the likelihood that a need exists is determined, the planner must then diagnose the problem to determine the causes behind the difficulty so that precise objectives can be set for the new plan.

As plans become more complex, comprehensive, and significant, the difficulty of determining cause not only increases, but the need for a fairly accurate statement of cause also increases. Under these conditions, there is a greater likelihood that the planner will find it advantageous to:

use more sophisticated tools
consult specialists
expend considerable time and effort
use a variety of approaches
use flexible plans
use tight controls.

Theory of choice

This topic has been subdivided into five units:

Selection of alternatives
Determination of variables
Assigning of quantitative value to variables
Assigning probability values to variables
Deciding on a plan

The theory can be stated in the following fashion:

The selection of alternatives is a function of the objectives of the plan and the company, the existing policies and procedures, the level and nature of available resources, and the time available for formulating a plan. Other important considerations are the cost in effort and money that would have to be expended to properly evaluate the alternatives, the significance of the plan or components, the custom of the trade, the frequency of preparation of the plan and the qualifications of the planner.

The selection of possible variables is a function of the nature of the plan, the importance of the variables to the plan, past experience and practices of the company, the experience of others, time available for formulation of the plan, and the qualifications of the planner.

The assigning of value to variables is a function of the nature of the variable, existing policies and procedures, adequacy of company records and experiences, the experiences of others, the relative cost in effort and money of making value assignments, time available and qualifications of the planner.

The degree of certainty with which value can be assigned each variable is influenced by the nature of the variable, the adequacy of existing company policies and procedures, the adequacy of company records and extent of its experience, the possible use of experiences of others, the relative cost in effort and money of measurement, the time available and the time period covered by the plan, and the qualifications of the planner.

The choice or rejection of a plan is influenced by the relative degree of uncertainty and reward associated with alternative plans, the nature of the uncertainty, company policy, alternative uses of resources, the importance of the plan to the total plan of the company, the flexibility of the plan, the financial position of the firm, past results and future expectations, attitude of government and stockholders, and the qualifications and attitude of the planner.

When there are two or more alternate plans designed to serve the same general purpose, or when a selection is to be made from two or more different plans, the choice is made easier to the extent that:

there is a significant difference in reward and level of uncertainty between plans and both variables move in the same direction—greater rewards and less uncertainty or less reward and greater uncertainty

where uncertainty does exist, many of its components are at least partially controllable by the company

all major components of the desired plan can be adopted under existing company policy while others would require some modification of policy

the plan can be financed from internal funds

the desired plan has greater flexibility than other alternatives

the plan can be introduced without reducing the level of efficiency of the company in other areas of performance

the plan is important within itself, but it has no significant influence on other company plans

the company has been successful in the past and anticipates continued success

stockholders will probably support the plan without question

government attitude does not play a significant role

the planner is qualified in every respect.

Theory of data collection and processing

The characteristics of data collection and processing are:

Complexity
Significance
Comprehensiveness
Time
Specificity
Completeness
Flexibility
Frequency
Confidential nature
Formality
Authorization
Accuracy
Ease of control

The theory applying to each of these characteristics can be stated in the following fashion:

The complexity of data gathering and processing is a function of the technical nature of the subject, the total quantity of data to be gathered, the divisibility of the data, the availability of guides and rules, and of the number, quality, and variety of sources.

The significance of data is a function of the strategic role it plays in a given plan, the importance of the plan, and the availability of substitute material.

Comprehensiveness is a function of the data itself and its natural division into subunits.

The over-all characteristic of time is a function of the time required to gather and process data, the time period covered by data, the up-to-dateness of material, and the time period in which projections are made.

The degree of specificity desired is primarily influenced by the use to be made of the information. The specificity actually provided is a function of the data itself, the skill and care of the researcher, the techniques used, and the adequacy of sources used.

The level of completeness is a function of the nature of the data, the qualifications of the researcher and the limitations of time and money.

The flexibility of raw and processed data is naturally a function of the nature of the data, the possible uses the company has for the data, and the form in which it is presented.

The frequency with which data becomes available and is processed is a function of the nature of the information and the use to be made of the data.

Confidential data as it relates to competitive advantage, personal nature of the data and managerial flexibility is a function of the nature of the data, the use to be made of the data, and time.

The level of formality of data is a function of the nature of the material, its significance, complexity and comprehensiveness, the time available, the period of time covered, the comparative cost and the level in the organization where the information will be used.

The authorization required is a function of the significance, comprehensiveness and confidential nature of the data.

The degree of accuracy maintained at all stages of the planning process is a function of the nature of the data, the form in which it is presented, the technique used at all stages, the use to be made of the data and the qualifications of the researcher.

The ease of verification is a function of the information used and the tools and techniques available for measurement.

The ease of control is a function of the data itself, the stability of the environment influencing the data and from which the data is obtained, and the customary techniques used to obtain the information.

Integration of data characteristics. The various characteristics can be integrated now, with emphasis being given to their interrelationships. There are a great variety of combinations possible with only the major ones being presented here. These expressions can be viewed as statements of general principles of data gathering and data processing.

The greater the complexity, significance, and comprehensiveness, the greater the likelihood that:

specialists will be assigned major responsibility for collection and processing

a committee will participate in the gathering of data

a consultant will be used

advanced techniques will be used.

The greater the significance, completeness, flexibility, and frequency of use, the greater the likelihood that:

the recording and collection of data will be routinized

the processing of data will be mechanized

data will flow to customary users of the information as a matter of form.

The greater the confidential nature, infrequency of use, and significance, the greater the likelihood that:

the gathering and processing of data will be done by official authorization

the gathering and processing of data will be done by a specialist or personal representative of a top executive

strict control will be exercised over the gathering and processing of data.

Theory of testing

The need for testing, like persuasion, extends throughout all stages of the planning process. Its greatest impact is upon three steps: awareness of need, testing components of tentative plans, and testing the final plan.

Testing is a function of the nature of the plan and its components, the availability of standards, company experience, experience of others, existing policies and procedures for testing, company resources, qualifications of the planner and the qualifications of the approving agent.

The reader may recall that in our discussion of the theory of testing as it relates to planning, we explained the usefulness of thinking of testing as a subsidiary plan to the main plan. This approach is particularly useful when plans are complex and significant and thus usually require a fairly elaborate testing program. With this approach in mind, we further suggested that the dimensions of a general plan could be applied equally well to a specific testing plan. We now show how the need for or desirability of testing and the difficulty of testing are related to the dimensions of a plan.

The need for or desirability or testing is likely to increase as plans become more complex, significant and, comprehensive; long range; confidential; inflexible and incomplete, and difficult to implement and control.

The difficulty of testing tends to increase as plans or components become more complex and comprehensive; extend over long periods of time; are confidential; lack specificity and completeness; are flexible; occur infrequently, and lack formality and authorization.

Theory of organizing for planning

This topic has been subdivided into four units:

Role of top-level units	Role of committees
Role of major departments	Role of specialists

The top-level units are restricted to the board of directors, executive committee and president. Each is treated separately.

Board of directors. The responsibilities of the board of directors in the

planning process are likely to be originating ideas for plans, authorizing the preparation of plans, approving final plans, and control of plan.

Some of the more significant characteristics of boards of directors are:

Size of the board
Composition of the board
Term of office
Compensation
Frequency of board meetings

The theory applying to the more important of these characteristics can be stated in the following fashion:

As the number of members on the board grows larger,

the greater becomes the chance to include specialists in all functions

the greater the need for precision and completeness in the statement of proposed plans

the greater the opportunity to shirk individual responsibility by following the crowd

the greater the need for strong leadership

the greater the opportunity for various points of view to be considered.

As the number of inside members increases, the greater the likelihood that:

the deliberations will lack objectivity

there will be less need for detailed explanations for orientation purposes

there will be increased need for getting at least an informal opinion from a sample of non-member stockholders before making major decisions

there will be increased need for keeping all stockholders informed.

As the number of functional interests (finance, marketing, manufacturing) increases as a per cent of the total board, the greater the likelihood that a balanced approach will be taken, and the longer the period of deliberation.

Where the board meets frequently and on a continuing basis, the greater the likelihood that:

important affairs will be handled on time

difficulty will be encountered in attracting top-flight outside directors

there will exist danger of overdirection and overcontrol of company affairs

the need for elaborate presentations of material of an orientation nature will be reduced.

The total success of a board of directors is a function of:

the qualifications of each member of the board

the adequacy of the total representation on the board

the incentive each member has to perform his duties

the degree of confidence existing among board members and between the board and stockholders.

Opportunity to maximize these desired attributes is enhanced when:

adequate compensation is provided board members

the board is composed of a proper balance of inside and outside directors

members are selected on the basis of ability rather than title or position

independent stockholders give the board of directors full support and refrain from petty interference in the affairs of the board.

Executive committee. The roles of the executive committee in the planning process are most likely to be preparing the final integrated plan and giving final approval to less significant but still major plans.

Some of the more significant characteristics of the executive committee are:

Size of the committee
Composition of the committee
Authorities of the committee
Terms of office
Compensation
Frequency of meetings

The theory applying to the more significant of these characteristics is that as the size of the executive committee increases relative to the size of the board, there is a greater likelihood that:

its actions will receive unanimous and unequivocal approval of the board

the committee will take on increased responsibility

the committee will be assigned decision-making authorities in the planning function.

The greater the diversity of training and experience of each member, the greater the likelihod that a balanced view will be presented on all items.

As the committee's duties are increased and its authorities extended, there is a greater likelihood that:

operating management will become more dependent upon the committee

the need for full board control over executive committee action will be increased

the problems involved in using outside directors will increase

the committee will give final approval to plans without reference to the full board.

The more frequent and regular the meetings of the committee, the greater the likelihood that:

emergency issues will be given prompt attention and even be prevented from developing

committee members will be inside members of the board

the committee will become more concerned with decision-making and less with advising and recommending action to the board

there will be a closer liaison between operating management and the committee

there will be less need for detailed orientation of members.

The total success of an executive committee is a function of:

the qualifications of each member

the adequacy of the total representation of the committee

the incentive each member has to perform his duties

the degree of confidence existing among committee members and between the committee and the board and operating management

the frequency with which they meet relative to the need.

These desired characteristics can be maximized to the extent that:

appointments are made on the basis of ability rather than title, age, or years of service

compensation is adequate to give proper motivation to participate

the board of directors delegates sufficient authority to accomplish the purposes for which the committee was established.

President. The duties of the president in the planning process are likely to include:

providing data for plans

preparation of final integrated plan for board or committee approval

issuing final approval on plans not requiring top-level group judgment

implementation and control of plans.

Some of the more significant characteristics of the president are:

Extent of authority
Diversity or specialization of interests
Term of office
Compensation

The theory applying to these characteristics can be stated as follows.

The president's planning authorities tend to be increased to the extent that:

the board and executive committee have confidence in his judgment

the board and executive committee are made up predominantly of inside members who are superior-oriented

the board and executive committee meet infrequently

the plans are of a nature not requiring top-level group judgment.

The greater the emphasis on general management qualifications of the president as opposed to more specialized technical training and experience, the greater the possible need for expert technical advice, and the greater the likelihood that all functional areas of the company will be considered.

The total success of a president is a function of:

his personal qualifications

the adequacy of the staff he has to work with

the degree of confidence existing between his office and the board of directors and their committees, on the one hand, and his office and his immediate subordinates, on the other

the personal incentive he has to succeed.

These desired characteristics can be maximized by:

selecting a president on the basis of ability rather than title or stock ownership

setting adequate compensation with incentives

delegating significant authority to the president to act independently.

Major department heads. The roles of major department heads are likely to be:

approving final departmental plans

providing data and advice to other departments and superiors

preparing company-wide plans in concert with others

implementation of top-level plans

control of plans.

Some of the more important characteristics of a department head are the importance of his function, the kind and amount of authority he possesses, and decentralization of planning authority within his department.

The theory applying to each of these characteristics is that as the importance of a given department head's function in the enterprise increases,

the higher up he will report in the organization

the more significant his departmental plans will become and the more they will tend to be approved by his superiors

the greater the extent to which he will participate in the development and approval of company-wide plans.

Where planning duties are assigned to department heads who hold functional authority, there is a greater likelihood that:

the plans with which they deal will be comprehensive

persuasion will become the dominant method of gaining cooperation

higher authority will be called upon to integrate the plans of the several functional departments

cross-communication along informal channels becomes critical to the development and execution of the plans

specialized knowledge and skills will be utilized in the development of plans

the functional department head will have authority to issue final approval for many plans developed within his functional jurisdiction.

Where planning duties are assigned to department heads who have only advisory authority, there is a greater likelihood that:

concentrated attention on planning will be facilitated

time and effort will be consumed in communicating the plans to superiors for their approval

separation of planning activities from performance will become pronounced.

Where planning duties are assigned to department heads whose primary duties are line activities, there is a greater likelihood that:

planning and performance will be done by the same persons

specialization may be sacrificed

less concentrated attention will be given to planning because of daily pressures

the plans will be practical, down-to-earth.

Where really significant planning authorities are delegated to department heads, there is a greater likelihood that:

the department head gives final approval to plans

the department head engages in a greater number of steps of the planning process

the development of the department head as a planner or as an executive is enhanced

the department head will take planning initiative

the department head will more readily participate in implementation of the plans.

The more the department head delegates planning authorities to his subordinates within his own department the greater the likelihood that:

he is allowed to concentrate upon his external planning relationships with superiors and other departments

the plans he retains for his own action will tend to be more significant, complex, and comprehensive and will receive closer attention.

Where the department head's role as advisor to his superior becomes more prominent, there is a greater likelihood that:

the plans will be complex and detailed

the superior's own knowledge of the subject area will be limited

the department's raison d'etre will be advisory

the superior will value subordinate participation and will have confidence in the judgment of his subordinates.

Where the department head's role as a cooperator in making company-wide plans on a group basis becomes more prominent, there is a greater likelihood that:

the plans will require incorporation of varied points of view

the plans will require active support and acceptance to insure implementation

the plans will be significant and comprehensive.

As the department head's role as advisor and information source for other organizational units becomes more prominent, there is a greater likelihood that:

coordination of departmental planning will be facilitated

conflicts and disparities in planning will be ironed out at lower organizational levels

formal communications channels will become less clear, and informal channels will take on added significance

persuasion will become more dominant and authority less prominent in the planning process.

Committees. The duties of committees in the planning process are likely to be evaluation of data and drawing up the final plan, and approval of the final plan where the plan is significant and comprehensive.

Some of the more significant characteristics of committees are:

Their duties and authorities
Their size and composition
Their leadership

The theory applying to each of these characteristics can be stated as follows.

Where more important planning activities are delegated to committees there is a greater likelihood that:

the plans will be long range in nature

the plans will be significant and comprehensive

there will be little need for speed in planning

communication and persuasion will be critical elements in developing and implementing the plans.

Where more significant planning authorities are delegated to committees, there is a greater likelihood that:

the committee will particiate in more steps in the planning process

the members of the committee will be more highly motivated in their planning efforts

communication and persuasion are likely to be facilitated.

Committees tend to function ineffectively to the extent that they are assigned to do extensive data gathering, to deal with plans of minor significance or those not naturally calling for multiple viewpoints, and to oversee the implementation of plans.

The size of committees tends to increase as:

their purpose is communicative rather than decision-making

the plans are comprehensive

coordination of subplans and the implementation of final plans are difficult and important

the plans are nonconfidential

participation is used as a method of achieving cooperation.

As the size of a committee increases, there is a greater likelihood that:

there is opportunity for representing all points of view
responsibility will become fractionalized
more time-consumption will occur in the planning process.

Effective committee leadership can be provided for to the extent that:

recognition is given to the probability that not one but two or more leaders will arise
these leadership roles can be complementary
committee membership is chosen with possible dual leadership in mind
the leadership is more rather than less permissive in general.

Over-all committee effectiveness is a function of assignments given the committee; size and composition of the committee; leadership of the committee; authorities given the committee and its members; resources at the disposal of the committee; and periodic evaluation of committee performance.

Desirable committee characteristics will be enhanced to the extent that:

assignments given them are in accord with committee capabilities
there exists clear definition of the committee's purpose
membership is selected with a view to the committee's purpose
appropriate authorities are assigned to the group and to each member
committee performance is evaluated
committee planning activities are, in turn, planned.

Role of the specialist. The theory relating to the role of the specialist in planning can be stated as follows:

the role of the specialist as a significant party to the planning process is increasing in importance

his role is most likely to be in originating ideas, gathering and interpreting data, formulating and recommending plans

his role usually does not include authorizing the preparation of plans or approving final plans

although he usually does not have primary resonsibility for implementing or controlling plans, he does share responsibility at least to the extent of checking on his basic premises

certain personal characteristics of many specialists tend to make their role in the organization difficult, at least initially, if proper care is not exercised by top-level management:

frequently their technical knowledge is significantly above the level of other members of the organization
their technical language and skills tend to be peculiar to their discipline
they are as much concerned with the theory behind their discipline as they are with the practical application of their skills
they have had experience in nonbusiness enterprises and little training or experience in operating departments or other staff functions within business units
their motivation for joining the company is to increase their technical knowledge by using company equipment and through association without intending to remain permanently with the company.

Certain characteristics of the assignment of the specialist, as well as the tools and techniques of his trade, tend to make his role difficult. Frequently, he brings significant change to the organization in at least one of the following areas:

the kind of information he seeks
the form in which he wants it
the use he makes of it

The changes resulting from his assignment may lead to new procedures, records, job assignments, organizational relationships, and decision rules.

Some companies use specialists with great success and ease, while others find the experience nerve-racking, unrewarding, costly, and troublesome. Although no simple approach can be used, top management can expect to find the experience most rewarding to the extent that:

a real need exists in the company for the skills of the specialist to be hired

members of top management recognize or are made aware of this need and concur at least in a general way

members of top management are prepared to adjust themselves to whatever logical demands are made as a result of the findings of the specialist and are prepared to support his recommendations once they have been approved

members of top management are intellectually and emotionally prepared to see that subordinate units provide necessary cooperation

members of top management use prudence and good judgment in accepting and applying the recommendations of specialists

specialists are hired after fairly tight position descriptions and position specifications have been prepared

fairly tight control is exercised over the work of the specialist until he has become properly oriented in the operational procedures of the company.

Role of communication theory in planning

The theory of communication as it applies to planning is as follows: Effective communication in planning is a function of the nature of the plan and its components, the qualifications of the communicator and communicatee, the level of communication consciousness in the organization, the adequacy of the media available for communication, and the number of people involved in the planning process.

As plans become more comprehensive, complex, and significant, the importance and difficulty of effective communication increase.

The greater the need for and difficulty of achieving effective communication, the greater the likelihood that the planners will find it advantageous to:

handle communications as a distinct problem

design one or more components of the plan specifically to communicate

test the plan or its components at various stages of development
use supplemental communication (for example, verbal explanation of a written plan).

Role of persuasion theory in planning

The need for effective persuasion is omnipresent and thus extends throughout all steps of the planning procedure. There are four steps, however, where persuasion has a particularly great impact: obtaining approval of the proposal, organizing the planning staff, establishing contact with all cooperating units, and obtaining approval of the plan.

The theory of persuasion as it applies to planning can be stated as follows:

The extent to which persuasion is necessary or is used is a function of the nature (dimensions) of the plans, the use of specialists in planning, the timing of the plans, the extent to which plans call for a departure from present practices, the preponderance of undesired over desired changes embodied in the plan, and the extent to which nonemployees affect the success of the plans.

Persuasion becomes more necessary and important to successful planning as:

plans become more complex, comprehensive, and significant
advisory specialists are used in the planning process
desired changes incorporated in the plan are outweighed by undesired changes in the view of those affected
timing of the changes makes them less readily accepted
plans represent substantial or drastic departure from present practice
non-employees are important to the success of the plan
organizational units other than the planner's own take part in the planning or the implementation of the plans.

Because various dimensions have different persuasion requirements, dimensions are discussed singly or in groups rather than as one unit.

To the extent that plans are significant, comprehensive, and complex,

persuasion becomes more critical and often more difficult
the planner must base his persuasive efforts on other dimensions of the plan
higher levels of management will participate in persuasive activities
components of the plan are designed specifically to persuade.

To the extent that plans are specific, complete, formal, authorized, and used frequently,

understanding and acceptance are likely to be enhanced
inflexibility in the plans may offset other advantages to the persuader.

To the extent that plans are inflexible it is likely that persuasion becomes more difficult, and the introduction of subsequent plans may require greater persuasive efforts.

Ease of persuasion is a function of the time element in planning. Persuasion is facilitated to the extent that:

time allowed for preparation of the plans is sufficient for full communication

flexibility in the plan allows for changing conditions between approval of the plan and its final execution

shorter-range plans introduce greater degrees of certainty than would longer-range plans.

To the extent that a plan must be held confidential, communication and therefore persuasion are made more difficult, and authority, rather than persuasion, tends to be relied upon.

Plans usually introduce change. Change introduces a degree of instability. The planner can offset the deleterious effects of this instability to the extent that he:

can explain fully the reasons for change

gives incentive for new responses and removes incentive for the old

provides help in learning the new

allows time for the transition from old to new

understands the value in holding to the old and demonstrates a sympathetic understanding of the problems of change.

Resistances to changes proposed by the planner stem from undesired changes in interpersonal relationships. The planner will minimize or overcome resistance to the extent that he:

can minimize disruption of well-established beneficial interpersonal relationships

brings people together whose frames of reference are similar

presents an image of himself as a source of help

minimizes threat and generates a feeling of acceptance

promotes broad participation in the planning decisions.

The planner can use groups in the organization to help bring about the desired changes. He can help to foster such groups and therefore to promote the acceptance of his plans. Groups become more effective as media of change as:

they and their subgroups have harmonious, well-understood goals

a shared feeling of need for change is generated within the group

the impetus for change comes from within the group

those affected by the plans share in their preparation

plans are implemented by someone within the affected group.

Additionally, the planner gathers support for his proposals to the extent that he:

includes in the planning parties who are not affected by the plans

can install the plans gradually, avoiding abrupt shocks (except where planning action may constitute a continuing threat)

gets full and enthusiastic support from his superiors and the superiors of those who develop and carry out the plans.

DIMENSIONS OF A PLAN: GUIDE TO ESTABLISHING PLANNING PRINCIPLES

The dimensions of a plan are:

1. Complexity
2. Significance
3. Comprehensiveness
4. Time
5. Specificity
6. Completeness
7. Flexibility
8. Frequency
9. Confidential nature
10. Formality
11. Authorization
12. Ease of implementation
13. Ease of control

Each of these dimensions will first be viewed independently and then certain interrelationships will be presented.

Principle of complexity

The complexity of a plan is a function of the number of major components within a plan, the number of alternatives one would logically consider in evaluating each component, the various guides and assistance available in the form of stated objectives and policies and staff specialists and outside consultants, the technical nature of the subject being considered and the divisibility of the plan and its components.

The principles of complexity can be stated as follows. The more complex a plan, the greater the need for precise planning tools, the more difficult coordination and control, and the greater the skill required of the planner.

Principle of significance

Significance is a function of the anticipated and actual cost of preparing and implementing a plan, anticipated savings or revenue expected

to result from the plan, and the strategic nature of the plan or its components. The more significant the plan,

the greater the likelihood that there is a separation of planning from performance

the preparation of the plan tends to become a team effort

the higher in the organization one must go to receive authorization to undertake preparation of the plan and to obtain final approval of the plan.

Principle of comprehensiveness

The degree of comprehensiveness of a plan is a function of the number of organization units affected by the plan. As a plan becomes more comprehensive,

authorization to undertake preparation of the plan is pushed further up in the organization

coordination during the preparation of the plan becomes more complex and increasingly important

the preparation of the plan becomes more of a team effort

planning tends to be separated from performance

final approval of the plan is pushed further up in the organization

company wide objectives and policies are followed more closely

the greater the problem of implementation

the greater the problem of control.

Principle of time

Time as an element in planning has at least four important forms. It can be thought of as the preparation time required for developing a plan, the lead time required for major portions of a plan to get underway, the time required for full implementation of a plan, or the distance ahead one wishes to anticipate the future as a basis for general planning.

The greater the length of time expended on preparation of the plan, the greater the chances that basic premises will change, and the greater the opportunity to pretest various components of the plan.

The longer the lead time required for major portions of the plan, the greater the chances that basic premises will change, and the greater the need for coordination and control of components of the plan.

The longer the period of implementation, the greater the chances that basic premises will change, and the greater the need for coordination and control of components of the plan.

The longer the period used for planning, the more difficult it becomes to get accurate and precise premises, and the better the opportunity a company has to stay ahead of competitors.

Principle of specificity

Expressed specificity within a final plan is a function of the adequacy of existing company policies and procedures, the time lag between the formal adoption of a plan and the anticipated date of implementation, the importance of the plan to the company, and the complexity of the plan and the alternatives available for each component.

The greater the degree of specificity in components of a plan,

the easier it is to present a fully integrated master plan
the easier communication, and often persuasion, becomes
the easier the implementation of the plan
the easier coordination and control become.

Principle of completeness

Completeness is a function of the preciseness and comprehensiveness with which the directive authorizing the study is prepared, the qualifications of the planners, the adequacy of the budget provided for conducting the study and the nature of the material studied.

The more complete a plan,

the greater its chances of success
the easier its implementation
the easier communication and persuasion become
the easier coordination and control become.

Principle of flexibility

Flexibility is a function of the restricted use of items contained within a plan, the provisions within a plan of alternate courses of action, and the rigidity of the planning process.

The greater the flexibility of plan, the greater the need for coordination and control, and the easier communication and persuasion become.

Principle of frequency

The continuity of the planning function along a given type of plan is a function of the degree of permanence associated with the elements of each plan, the dynamics of the economy, the company's policy regarding innovation and its leadership role in industry, and the total capacity of the firm, human and material.

The more frequently a specific type of plan is formulated,

the less important long-range premises become
the more likely the planning process has become routinized
the shorter the planning period.

Principle of confidential nature

The dimension confidential is a function of the competitive advantage that lies in secrecy, the extent of ill-will that would be created among all persons connected with the company if the plans were known in advance, and the personal nature of the information contained in the plan.

The more confidential the plan,

the higher up in the organization one seeks authorization to undertake preparation of the plan

the fewer the number of people who become concerned with the preparation and implementation of the plan

the greater the problem of assembling premises.

Principle of formality

Formality is a function of the complexity, comprehensiveness, significance, and level of authorization of plans.

The greater the degree of formality at all stages of the planning process,

the greater the ease of acceptance by all participants

the greater the ease of effecting control

the greater the chance that some flexibility will be lost.

Principle of authorization

The formal authorization of a given plan is a function of the significance of the plan, the confidential nature of the plan, the quantitative and qualitative nature of the cooperation required, the explicit authority of the planner, and the level within the organization in which the plan is to be prepared and implemented.

The more official a plan, the easier the obtaining of cooperation and coordination in the preparation and implementation of the plan; the less the problem of control; and the quicker the whole planning process can be performed.

Principle of ease of implementation

The ease of implementation of a plan is a function of the complexity of the subject matter covered, the emotional response likely to be engendered in those responsible for its implementation, the internal logic of the plan, and the way in which the planning process was performed.

The greater the ease of implementation, the shorter the implementation period; the greater the ease of coordination and control; and the greater the chances of success of the plan.

Principle of ease of control

Ease of control is a function of the preciseness and accuracy with which premises can be satisfied, the accuracy of the plan, the preciseness and accuracy with which standards of performance can be established, the nature of the planning process and the measuring tools available.

The greater the ease of control of a plan,

the greater the chance that the need for modification of the plan will be detected quickly and early

the greater the likelihood that major elements of the control program will be placed in lower organization units

the greater the ease of coordination.

Since all plans have each dimension present in varying degrees, a fuller appreciation of the significance of each dimension can be had when their interrelationships are established.

PRINCIPLE OF INTERRELATION OF DIMENSIONS

The principle can be stated as follows: All dimensions of a plan are interrelated and thus exert a combined influence on the planning process. The greater the ease of implementation, ease of control, specificity, frequency, authority, completeness,

the easier the obtaining of cooperation at all stages

the shorter the full period between authorization of a major project and its completion.

The greater the comprehensiveness, complexity, and significance,

the higher the level in the organization for approving a plan

the greater the need for exercising tight control and coordination

the greater the likelihood that the planner will use group or committee action rather than single action in carrying out the planning process.

PRINCIPLE OF PRIMACY OF DIMENSIONS

Whenever several dimensions move in the same direction, their interrelationships tend to support each other and intensify their influence on the planning process. When certain dimensions move in opposite directions to one another, the principle of primacy of dimensions applies.

In the example above, it was assumed that comprehensiveness, complexity and significance moved in the same direction. Dimensions may vary in their magnitude and their direction. A plan could be extremely

complex and comprehensive but of little significance. Or, a plan could be highly significant but simple and restrictive. In these cases, the principle of primacy of dimensions would apply. The principle can be stated as follows: When two or more dimensions occur with one or more relatively high and one or more relatively low on the intensity scale (complexity high–significance low, for example) one or more dimensions will take priority over other dimensions and thus exert the primary influence over the planning process. Primacy of a dimension is a function of the nature of the plan, the dimension itself, the intensity of the dimension, and the direction and intensity of other dimensions.

A LOOK INTO THE FUTURE

Some of the more significant changes which will have considerable influence over the planning process are:

1. The greater use of sophisticated tools and techniques of planning.
2. The increased use of specialists to provide line executives with the best statements of alternatives and the consequences of each possible choice.
3. The further separation of planning from performance.
4. The use of planning as a continuous function rather than a periodic one.

Areas for research in planning theory

On nearly every page of this book there has been some statement of theory or hypothesis that points out fruitful ground for research effort. We can suggest only a few of them here. For example, it is extremely useful to develop some kind of measuring scale to quantify intensities or degrees for each dimension of a plan. This measuring device can then be applied to any given plan and may be used to make comparisons between plans, showing the effects of varying intensities of dimensions upon the plans, planning process, and implementation of plans. Tests could then determine if more comprehensive plans tend to involve more persons in their formulation and are characterized by the use of persuasion rather than authority, if complex plans tend to be approved high in the organizational structure and to include the use of specialists in their formulation, and if complex plans are more difficult to test, and so on. Interesting research may be done by testing the principle of primacy of dimensions through the use of such a measuring device.

Other areas for research include: an empirical study to determine just where plans do originate in an enterprise; determining the relationship

between ease of persuasion and the time period covered by the plan; investigating to corroborate or disprove the hypothesis that executives with functional authority tend to deal with more comprehensive plans than other executives at the same organizational level; testing the theory that increased use of specialists has resulted in further separation of planning from implementation, or that greater separation of these activities has increased the use of specialists; testing the hypothesis that the more frequently a plan is prepared and the shorter the duration of the plan the greater the likelihood that there will be an uncritical repetition in the use of planning premises.

Planning theory represents a rich and fruitful ground for future research and development—activities which we hope will be furthered through the publication of this book.

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